

# THE AMERICAN BEE JOURNAL

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## Contents of this Number.

### Editor's Table.

Editorial Items.....	385 to 395
Bee and Honey Show in London.....	386
Caledonian Bee and Honey Show.....	388
The Prize Sections in London.....	389
Bingham & Hetherington Honey Knife.....	389
Queen Introducing Cage.....	390
National Bee-Keepers' Convention.....	391
American Honey in England.....	393
McPherson's Frame Holder.....	394
"Afloat".....	394
Why Bees do work in the dark.....	395

### Foreign Notes:

Comb Foundation—No. 5.....	395
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### Correspondence:

Preparation for Winter.....	397
Comb Foundation.....	397
Bee Stings.....	398
Drone-Killing Birds.....	399
Another Bee Enemy.....	399
Queens Duplicating Themselves.....	400
Bee Matters in Canada.....	401
Virgil and the Honey Bee.....	401
What is the Italian Bee?.....	402
From Southern California.....	403
Honey Resources of Florida.....	404
Style more Important than Quality.....	405
Transferring Bees.....	406
Watch the Swarms.....	407
Uniting Bees.....	407
How to Winter Bees.....	408
Bee-Keeping in the South.....	408
The Frog as a Bee-Enemy.....	409
The Composition of Honey.....	409
A Canadian Apiary.....	410

### Conventions:

Sanilac County, Mich.....	411
Western Illinois and Eastern Iowa.....	411
Wintering.....	412
Spring Drivelling.....	412
What will Pay to Plant or Sow?.....	413
To Keep Bees from Swarming.....	413
Where and How to Dispose of Honey.....	413
Do Bees Injure Blossoms?.....	413
Report on Adulteration.....	413
Best Method of Rearing Italian Queens.....	415
Why do Bees Swarm Out in Spring?.....	415
Lancaster County, Pa.....	415
Texas Bee-Keepers' Association.....	417
Dainty Bees.....	418

### Our Letter Box:

Preston J. Kline, M. A. S.....	418
C. W. Taylor, Edmund Haynes, T. F. Bingham, Peter Sears.....	419
Wm. Martin, R. M. Osborn.....	420
I. H. Moore, A. E. Wenzel, Joel Brewer, B. M. Lingle.....	421
Wm. W. Cague, C. S. Newsom, J. Few Brown, M. A. Newman, E. France.....	422
J. C. Peters, Wm. Lossing, H. D. G. Alderman & Roberts, A. M. Rhodes, E. R. Douglass.....	423
James Baird, E. J. Rockefeller, P. Billing, J. T. Williamson, W. T. Stewart, C. T. Penrose, J. L. Wolcott, A. E. Wenzel.....	424
Preston J. Kline, C. McMillan, G. J. Reed, B. Stroud, I. M. Alling.....	425
Charles Keller, J. M. Valentine, A. B. Beall.....	426

## Editor's Table.

There are several communications and many letters crowded out of this number, which we much regret, as all are of interest to some of our readers. We certainly feel very grateful for the liberal contributions to our pages, and only want of space is the reason for "laying" them over.

Mr. J. Pometta, whose advertisement may be found elsewhere in this number, has arrived from Europe, with a large invoice of very fine Italian queens. In fact, they are as fine a lot as we have ever seen. Orders may be addressed to him in our care, or to the AMERICAN BEE JOURNAL.

From Mr. G. O. Kalb, Secretary, we have received Premium List of St. Louis Fair and Exposition, to be held Sept. 22 to Oct. 11, 1879. Fifty thousand dollars in premiums are offered, and their competitive list embraces nearly everything.

Mr. F. C. Smith, Atlanta, Ga., favors us with a copy of Premium List of Georgia State Fair, to be held at Macon, Ga., Oct. 27 to Nov. 1. The list is quite elaborate and liberal.

Mr. Frank Benton, Lansing, Mich., sends us a copy of Premium List of Michigan State Fair, to be held at Detroit, Sept. 15-19, 1879. Mr. Benton deserves great credit for his successful efforts in the liberal and judicious recognition of apicultural interests with the management of the Michigan State Fair. No less than 13 premiums are offered, and their manner of placing will greatly stimulate competition.





### Bee and Honey Show in London.

The British Bee-Keepers' Association held its 5th great exhibition at the gardens of the Royal Agricultural Society at South Kensington, London, July 22-24, 1879. These gardens are perfectly magnificent and in every way a suitable place to hold a Bee and Honey Show,

The display of apiarian implements was simply immense, covering the whole ground from a bee veil to a comb foundation mill. The display made by the AMERICAN BEE JOURNAL was not in any way competitive; we were requested to enter many things for competition, but we firmly declined. We regarded our position—representing the bee-keepers of North America—as not being in harmony with competing for prizes. We displayed at both of the London shows, simply to show America's best thoughts expressed in its apiarian implements, and were well paid by the interest manifested in their examination, and the enthusiastic reception that we everywhere met with.

In order that Americans may fully appreciate the measure of good feeling that was everywhere exhibited towards their representative, we may be pardoned, perhaps, for copying the following notices of the press. The first is from the *British Bee Journal*:

Another distinguished visitor arrived on the ground during the Show, not on the day appointed, for, through an accident, or rather a series of them, his ship had to put back and he was delayed. We allude to Mr. T. G. Newman, the editor of the AMERICAN BEE JOURNAL, who was received with open arms by all who knew his fame, and his kind, genial manner soon made him a general favorite. An advanced bee-keeper, he is most uncompromising against adulteration and humbug in all their bearings, and on several occasions boldly, yet with due modesty, enlarged on the improvements which had taken place in American bee-culture, and, in reference to a honey market, commended to the notice of English bee-keepers the splendid methods of marketing the product adopted by Messrs. Thurber & Co. He was everywhere received with cheers, and his observations were listened to with profound attention, broken only by the shouts of laughter which his propensity for fun often created.

It may here be noted that we gave two lectures on "American Bee-Keep-

ing," in the Bee Tent at Kilburn, and two more in the tent at South Kensington. It was these lectures that Mr. Abbott referred to in the above paragraph. We labored to place Americans and their honey product in their true light before British bee-keepers, and we are fully rewarded in finding that the prejudice so often exhibited heretofore, has now no longer any existence. It was unfortunate that some adulterated American honey should have found its way to Great Britain, but as soon as Englishmen understand that we neither approve of the transaction nor apologize for it, but instead, that we have waged a war against adulteration in every form, they are not slow in showing their appreciation of our course.

The *London Gardener's Chronicle*, an ably edited and high-toned agricultural paper, after giving a report of the South Kensington Show and the list of prizes awarded, remarks:

Foremost in the order of arrangement is a counter devoted to exhibits sent from America by the editor of the BEE JOURNAL, of Chicago, among which is a very clean sectional super, made from one piece of wood, which folds up into a neat square box; a queen cage for postal transmission, holding securely, as well as the queen, a sufficient supply of food and water to last during a journey of a few days. There is here also a one-quarter size model of the Langstroth hive, which, although there are numberless other patterns, is used by about half the bee-keepers of the States.

In the gardens of the Society, during all day of the show, was exhibited and explained at intervals the manner of bee-driving and other manipulations, which was as usual a great attraction; and on the first day a competition among experts, as to who could in the quickest and neatest manner drive out the bees from a straw hive, capture and exhibit the queen, took place.

Mr. F. Cheshire, Mr. J. Hunter, Mr. C. N. Abbott, and other well-known bee-masters, varied the entertainment and instruction with short lectures on several interesting matters of bees and bee-culture.

Mr. T. G. Newman, of Chicago, President of the Bee Association of America, who is on a tour throughout Europe to the various bee shows, also gave two inspiring addresses, pointing out the American methods of obtaining marketable honey.

A very interesting paper on the "Plants and Flowers Most Worthy of Cultivation as Honey Producers," was also read by Mr. W. Ingram. A general meeting of the members of the Association, presided over by Bishop Tozer (in the absence of the Lady-



President, the Baroness Burdett-Coutts), also took place, and the meeting is to be brought to an end by the presentation of prizes by the Countess Brownlow.

To the indefatigable Honorable Secretary, the Rev. H. R. Peel, and the untiring committee, much praise is due for so successful a meeting under the depressing circumstances of the season.

The *London Times*, the most influential paper in Europe, gives a good report of the Bee and Honey Show from which we copy the following :

The prize for the best hive for the purposes of observation has been awarded to Mr. J. A. Abbott, the well known bee-master of Southall, for a hive of very simple construction, formed by putting loose frames in a box made of plate glass. Very noticeable in this observatory is the habit of the bees to cluster together for warmth on one comb, leaving the others entirely deserted.

For the best and most complete movable-comb hive, with covering, stand and facilities for storing surplus honey, the first prize is taken by Mr. J. M. Hooker, of Sevenoaks, with the improved Alexandra hive, a vast American hotel for bees. In the same class Capt. P. E. Martin, of King's Somborne, near Stockbridge, Hants, shows the simple bar-frame hive which he calls "The Sailor," used on a large scale in Hampshire to supply honey to the London market. One of the co-operative stores lays out £50 or £60 in a month for honey from Mid-Hampshire, made in these and the like hives from the sanfoin grown on the chalk.

Mr. T. G. Newman, of Chicago, exhibited some American "supers," which were a very great novelty. They are little sections of one piece of wood nearly cut through at three points, with enough wood left to serve as a hinge, and mortised together at the fourth angle. They are marvels of neatness and cheapness in construction. Some of the American "supers" cost only 2s a 1,000.

Mr. J. A. Abbott wins first prize for golden-banded Ligurians, Messrs. Neighbour and Baldwin tie for the brown English bees. In the general foreign class Messrs. Neighbour show Carniolans, Mr. J. P. Jackson Cyprians, imported from Cyprus by Cori, of Bohemia. No one sends Egyptian bees, but there is an Egyptian hive—a long, hollow cylinder rolled together out of Nile mud and straw—in Messrs. Abbott's collection.

The prize for the largest and best harvest of honey in the comb from one stock is taken by Mr. S. Thorne, of Baldock. It consists of 40 lbs. gathered on the borderland of Herts and Cambridgeshire from the blossoms of fruit trees, sanfoin and clover.

Mr. C. N. Abbott takes the first prize for rich heady mead, 5 years old, such as his Saxon namesakes may have quaffed. The same exhibitor wins the first prize for a collection of hives, bee-furniture, etc., masks to protect the face of the bee-driver, censers to smoke the bees for a time out of their hives, etc. Messrs. Neighbour show in the same class sprinklers to scatter salicylic

acid through the hive and so avert the pestilence of foul brood, and a roller to turn a plain sheet of wax into the nucleus of a honey comb, and give additional regularity and precision to the marvelous building instinct of the bee. The honey extractors in which the combs are placed, and the fluid slung out of them by centrifugal force, are a modern invention and a most useful one, allowing as they do, the combs to be returned to the hives and the bees to be saved the many valuable days of summer which otherwise would be consumed in building up fresh combs. The first prize is taken by Mr. T. W. Cowan, of Horsham, with the *Express Extractor*, by means of which the honey on both sides of the comb can be extracted without touching the frames. Mr. Walton shows extractor which has the advantage of being covered and so protected from the crowds of curious bees who otherwise inspect the operation and become imprisoned like flies in amber in the run honey.

Mr. John Hunter, the well-known apiarian writer, whose "Manual of Bee-Keeping" has just been issued in a new edition, shows a good collection of microscopic slides illustrating the natural history of the bee. The first prize for the best display of British bee flora goes to Ellen Rooke, of Lymington. Most interesting specimens of flowers are shown in the class, crocus, the blossom of the withy, cinerarias, polyanthus, box, dandelion, wood anemone, celandine, berry and the most serviceable of bee plants, blue borage, which hangs its blossom downwards, so that the bee can labor in it protected from the rain, and the honey is never washed out. An acre of borage feeds 100 colonies.

Mr. F. Cheshire, of Acton, exhibits beautifully drawn and colored diagrams of the bee and its relation to flowers, enlarged from the microscope. In these the fact is brought out that the drone cells are sealed with much larger and stronger fastenings than those the bees affix to the cells of female bees. M. Dennier exhibits the Alsatian bar-frame hive and the Alsatian bee-journal published in German and French at Strasburg.

In the honey fair, delightful white American supers of honey from Mr. Isham's are shown by Messrs Thurber.

In a tent on the grounds, where the Horse Guards' band played, a keen competition went on on Tuesday for the driving prize. The duty of inducing bees to leave their hives while the honey is extracted, or transferring them to a new hive, is that which most tests a bee-master's skill.

Mr. Ingram, of Belvoir castle (the Duke of Rutland's gardens), read an interesting paper on the flowers which the bee-master should plant to give his colonies food at all seasons.

On Wednesday, Mr. Newman, of Chicago, the official representative of the American Bee-Keepers' Association, gave a lecture in the tent on American bee-keeping, and denounced unsparingly the ordinary English method or want of method. Mr. Newman proceeds to the Perth Show, and thence to a great show at Prague, and others in France and Italy.





Concerning the exhibit of American honey, made by H. K. & F. B. Thurber & Co., of New York, the *British Bee Journal* remarks follows:

Another feature at the Kilburn Show was the American honey, about 2 tons of which were exhibited by Messrs. Thurber & Co., of New York, whose polite agent (Mr. Hoge) gave us every possible information. Some of the samples were very fine, and all looked beautiful; though we must not forget that taste governs the idea of value in honey, and that few think alike on such matters. But the greatest feature of all was the visit on one day of their Royal Highnesses the Prince and Princess of Wales, their three children, and suite, and the deep interest they took in the various exhibits, not the least of which was the honey above mentioned, of which Mr. Hoge was the exponent. The Observatory hives, with bees all visible, held their attention for several minutes; and, though we were not able to point out the queen of our hive, through the denseness of the mass of bees, their Royal Highnesses were gratified in that respect on reaching that of W. Freeman, Esq., whose hive afterwards received the first prize—a hive called by him the "Baroness," but which, after such royal notice, we should feel inclined to promote to the title of "Princess."

On another occasion the Kilburn Show was visited by H. R. H. the Duke of Cambridge and his grace the Duke of Sutherland and party, and they were highly pleased with a small case in which the queen, surrounded by her retinue, was exhibited by our junior, causing an observation to fall from H. R. H. on the monarchy in insects.

### Caledonian Bee and Honey Show.

The Caledonian Apiarian Society's exhibition was held in two large tents in Perth, Scotland, on July 30 to Aug. 1, and was a decided success. The *Dundee Advertiser* thus describes the Show and its arrangement:

On the five previous seasons the Society has held public competitions in connection with the Highland Agricultural Show. The Highland Society, with their usual appreciation of whatever is for the good of the working classes, have not been slow in recognizing the claims of the Bee-Keepers' Association, and this year, besides giving a free stance, have voted a grant of £20 and a handsome silver medal. Hives and other apiarian appliances are on this occasion more numerous than formerly, but owing to the late and wet summer there is a falling off in the honey department. The leading attraction to the public at this show was the driving of bees from one hive to another, leaving the combs, honey and brood intact. It is astonishing to see with what ease and safety this operation is performed, the bees when well fed, not showing the least incli-

nation to use their sting. From each hive so denuded of its inmates the queen, a drone and worker were taken, put in a glass tumbler and handed around for the inspection of visitors. A bar-frame hive, on the movable-comb principle, stocked with Italian bees, was brought into the tent, and the internal arrangements of the hive explained. The combs were also taken out one by one and exhibited. In the furniture tent is a large display of apiarian material, shown by Mr. W. W. Young, Perth, and Mr. Steele, Fowls Easter. Mr. Steele also exhibits a machine for making impress wax sheets. This is an American invention, and produces sheets of wax impressed with hexagonal bases, on which the bees build beautifully regular cells.

Mr. Thomas G. Newman, editor of the *AMERICAN BEE JOURNAL*, Chicago, gave two lectures on scientific bee-keeping at the tent. He referred to American apiculture, describing the implements used there, and the scientific management of bees for the production of the most and best honey, and urged upon those interested to adopt the most improved methods, in order that they might have good results. This gentleman has been appointed by the American Bee-Keepers' Association to attend all the apiarian shows in Europe, and, comparing British and Continental methods of apiculture with the American system, will report to his own Society, which meets in October in Chicago, of which he is President.

The judges of the exhibits were Mr. Jas. D. Anderson, Dairy; Bailie Langland, Kilmarnock, and Mr. Shearer, Yaster Gardens. Mr. Newman acted as umpire.

The *Scotsman*, a Glasgow paper, gives the following account of it:

Nothing more enjoyable could be conceived than the exhibition of honey, hives and bees, under the auspices of the Caledonian Apiarian and Entomological Society, which is being held in a marquee on the show ground. Formed about five years ago, for some time after its formation the Society and previously, the gentlemen to whom its existence is due had an uphill battle to fight. When the attention paid to the subject of bee-keeping abroad is considered, apiarian science can only be said to have been neglected to a marvellous degree in this country, but the measure of attention now being turned to bee-keeping promises to lead to most important results. That bee-keeping has received an immense impetus is evidenced by the fact that some of the members of the Society who were content to possess 2 or 3 colonies are now keeping 40 or 50. But in America the pursuit is followed on an immense scale, there being in some instances on a single farm over 3,000 colonies.

Mr. Thomas G. Newman, editor of the *AMERICAN BEE JOURNAL*, has been deputed by the bee-masters of America to visit Great Britain, and to inquire into the position of apiarian science in the home country, with a view of laying the results of his researches before the Bee Convention which meets at Chicago, in October of this year. He will visit Continental countries, and ar-



range co-operation with the principal Associations formed for the furtherance of bee-keeping. He is daily in attendance at the Show at Perth, and at 1 o'clock yesterday he delivered an interesting lecture in the tent on the subject of bee-farming, as conducted in America.

In considering the quality of the Show it must be borne in mind that the present season has been, to an extent almost unprecedented, unfavorable to bee-keeping. On this account the display of honey was very poor, as it was at Kilburn; but this was more than compensated by the display of observatory hives, bee furniture and all the appliances necessary to stock an apiary. There were only three glasses of run honey, but there was a good show of sectional supers. The observatory hives, 7 in number, were a source of great delight to the visitors in finding the queen. In the case where a queen was lost in transfer a princess cell was immediately begun. There was on sale a number of Italian queens, which are believed to possess greater vitality than home queen bees and to be capable of standing better our variable climate. The Highland Society offer a medal for a driving competition, extending over the 4 days of the Show, for the competitor who discovers the queen in her passage from one cell to another, and who in the quickest, neatest and most complete manner drives out the bees—the bees to be driven from the original hive.

To R. J. Bennett, Esq., of Glasgow, the Honorable Secretary, the Society is indebted for its great success. He is a gentleman of untiring energy and zeal, and withal a progressive and scientific apiarist.

The Scotch Society vied with the English Association in its enthusiastic reception of the American representative, and in its accord of honor to American apiarian inventions and its efforts on behalf of the production and consumption of honey. On Thursday evening it honored us with an excellent dinner, to which the prominent apiarists were invited. After which the toasts and speeches were highly complimentary to American apiarists and the editor of the AMERICAN BEE JOURNAL.

At the Society's business meeting the following resolution was unanimously passed: "Resolved, That our silver medal be presented to Thomas G. Newman, Esq., of Chicago, U. S. A., President of the North American Bee-Keepers' Association, as a souvenir of the visit he has honored us with, and for

the valuable services he has rendered to the science of bee-culture and to the present session of the Caledonian Apian Society."

At the dinner party the course of the AMERICAN BEE JOURNAL in defense of bee-keepers and its denunciation of adulteration of honey was warmly indorsed.

Our visit to Scotland and our intercourse with Scottish bee-keepers will be remembered with pleasure while we live.

THE PRIZE SECTIONS IN LONDON.—The *Journal of Horticulture* (London) remarks as follows, concerning this manner of putting up honey for the market:

Honey by English producers in sections, and, therefore, in salable form, next attracts attention; but here in quantity and appearance we are distanced immensely by America, Mr. Thurber showing no less than 1½ ton in section boxes of 2 lbs. each. The color of this honey is not to be excelled. It is sealed throughout, and flat as a marble slab. Respecting its quality opinions differ. Here, the crucial point, England will probably be able to hold her own; while there is no reason that in flatness, and generally speaking in color also, we should not run abreast with the best American producers. These sections we commend to the attention of all who would enter the honey market. The tin separator has had hitherto almost all to do with the flatness of the comb, but with this exhibit is shown a specimen of cardboard which must, we think, supersede tin, and which is therefore worthy of careful inspection.

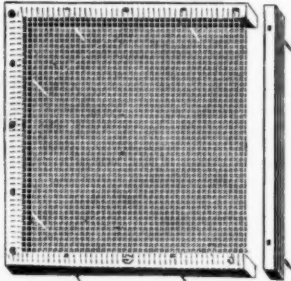
BINGHAM & HETHERINGTON HONEY KNIFE.—The London *Journal of Horticulture* remarks concerning this knife as follows: "This American uncapping knife has a thick blade beveled towards each edge, so as prevent the drag occasioned by a large surface of metal touching the comb. This knife should be remembered by all about to buy an extractor. It was exhibited by Mr. Newman, the courteous editor of the AMERICAN BEE JOURNAL, who is a visitor to the Kilburn Honey Show. He addressed in inspiring and eloquent terms the gathering in the manipulating tent; his remarks meeting with a hearty response. \* \* The Americans contribute among the well-known knick-nacks the Bingham smoker."



### Queen Introducing Cage.

As the season has arrived when introducing queens is a somewhat hazardous undertaking, and as many may wish to supersede old or faulty ones, or introduce expensive, tested Italians, with a view to cheaply Italianize the apiary in the spring, we give an engraving of a cheap and infallibly safe introducing cage, which was suggested to us by Mr. Wm. Mapes, of Battle Creek, Mich., last spring, and which we have given a pretty thorough trial.

To make the cage, take four strips of wood about 4 inches long and  $\frac{3}{8}$  of an inch square; mortise both ends of one piece half way, and one end each of two others, so as to form a 3-sided frame; on this tack fine wire cloth, and through each side-piece drive two  $\frac{3}{4}$  or 1 inch



finishing brads, letting the ends project; drive two brads through the fourth or loose strip. Now, take from the brood chamber a frame of comb containing sealed brood, remove the queen from it, if there, then shake the old bees in front of the hive, and place your introducing cage on the comb, over sealed brood and a few cells of uncapped honey, letting the projecting nails run through the comb so as to hold the cage firmly and closely on the surface of the comb; then let your new queen and accompanying bees run from the shipping cage under the wire cloth, and quickly close by placing the fourth strip on the comb at the open end of the cage. Replace the frame in the hive, and the work is done. As the young bees emerge from the cells, they of course affiliate with the queen confined

with them, and the newly emptied cells afford room for depositing eggs. At the end of two or three days she can be released by removing the end strip and all danger from "balling" is obviated. Should the weather be unfavorable for opening the hive, no harm will result from leaving her confined for a week. With this arrangement for introducing, we think the old queen might be left in the hive for a couple or three days, or until the new queen is released, thereby avoiding any depletion in strength of the colony, which is important, unless the colony be very strong. As this is an inexpensive cage, the whole cost not exceeding one or two cents, and but a few minutes time and little skill to make, we feel assured it will save many valuable queens and much disappointment, by making it public.

Iowa City, Iowa, Aug. 15, 1879.

T. G. NEWMAN, Esq., Prest. North American Bee-Keepers' Society:—In compliance with your courteous invitation, I will read an essay at the National Convention in Chicago, in October; subject, "Increasing the Demand for Honey." Hoping the Convention may be in all respects a success,

I am truly yours, O. CLUTE.

[We are pleased to add the above, from so able a pen, to the valuable list of essays heretofore indicated. There is no doubt the Convention will be a success—a great success—for the valuable essays already provided will make it successful, even though it should embrace no other feature; and the bee-keeper will lose much who allows mistaken economy to keep him away.—ED.]

The Bingham smoker was not in competition at the various Honey and Bee Shows of England, but we took some of them for Mr. Bingham, as well as some of the Bingham & Hethington honey knives, and exhibited them, and they were universally acknowledged to be the best things known to those who saw them. So much are they admired that some exact copies of the smokers are being made in England now.



## National Bee-keepers' Convention.

Indications now point to a large and enthusiastic gathering of the bee-keepers of North America at their Fifth Annual Convention, to be held in Chicago, on the 21st of October, 1879. The interest manifested recently in England at the great Bee and Honey Show in connection with the Royal Agricultural Society's Exhibition, and which was shared by the nobility and even royalty itself, is a strong proof of the claims of progressive bee-keeping upon the public consideration. In Germany, great interest has been taken in these National Conventions for several years, until recently they have become monster mass-meetings (the meeting of 1878 being attended by nearly a thousand representatives), and so harmonious were their sessions that the apiarist looked forward to the Convention as to an extended and important holiday, in which duty was combined with pleasure, and both crowned with profit.

All admit that the scientific bee-keeper of America leads the Old World in successful bee-culture, but even here we have much—very much—yet to learn, and how can we so well advance ourselves in knowledge, and arrive at correct conclusions, as in these National Conventions, where each State, territory and district is (or should be) represented; where the novice can learn from the veteran; where the amateur can share in the experience of the specialist; where the unlearned can imbibe knowledge from the wisdom of the scientist, and where all are actuated by the one impulse—PROGRESS?

In North America, where the honey and beeswax product is estimated in round numbers at about \$15,000,000 annually, and this, too, is capable of expansion to an almost fabulous amount, the bee-keeping interest is destined at no distant day to become a considerable factor in its productive wealth. There are many reasons why a National Association should receive the hearty

and united support of every bee-keeper in the land, as a combination for advancement in scientific methods, and as a deliberative body for making combined movements in establishing standard markets, general usage, etc. Much is needed in the way of legislation for the prevention of the pernicious adulteration now so largely carried on. Revisions are required of the many railroad freight tariffs which now so mercilessly discriminate against the bee-keeper by charging double and even greater rates for the transportation of honey, hives, bees, etc. Many other measures require a general combination of those interested to effect reforms, which individual effort can never accomplish. To be sure, we now have our District and State Associations, and very agreeable and profitable they are in their tendencies; but are they broad enough in their scope and influence? Would they not subserve their purpose much better, were they one and all, component parts of a general body as broad as the continent itself, and as comprehensive as the science of bee-keeping?

These reforms and improvements cannot be brought about at a single session of the Convention; but with a good, big, rousing attendance at the next Convention, much can be done to put the matter in shape. A general comparison of notes and experience can be made; a cordial interchange of sentiment can be had between the greater and lesser lights in bee-keeping, and an *intente cordiale* established, which can be productive of only good, in the friendly recollections to be cherished thereafter. President Newman will have returned from the Old World's Conventions, and fresh in his mind will be the manners, experiences and incidents of the bee-masters of England, Scotland, France, Austria, Prussia, Denmark, Hungary, Switzerland and Italy. His trip will be an extensive one, and his aim is wholly to learn in what we can improve ourselves, either in bees or practice. His report





will be full of interest, and his suggestions will be free to all. We may also expect most of our home-honored beekeepers to be present.

The question for debate is not whether we can *afford to go*, but *can we afford to stay away?* The utility of our Conventions can be aptly illustrated by the skillful management of a colony of bees: To gather and store a goodly amount of honey, you would first crowd your hive with bees. Or, to make an application of Prof. Cook's comprehensive motto: "Keep all colonies strong!" let it be, "Crowd your Convention halls."

The editor of the AMERICAN BEE JOURNAL was entertained at the palatial residence of the Rev. Herbert R. Peel, the Hon. Sec. of the British Bee-Keepers' Association, from Saturday to Monday, July 26-28. Mr. Peel is one of the aristocracy of England, but one who feels a deep interest in all that pertains to the welfare of mankind in general, and is, therefore, deservedly honored by both rich and poor. He is thoroughly progressive in his views, and, being of unbounded energy, is just the one to make the British Bee-Keepers' Association one of the most successful institutions of Great Britain. Neither time, nor energy, nor expense is spared by Mr. Peel in making this Association a success. In fact, he is its very life and soul. Such excellent apiarists as Messrs. F. Cheshire, T. W. Cowan, J. M. Hooker, John Hunter, C. N. Abbott, Alfred Neighbour, Wm. Carr, R. R. Godfrey, W. N. Griffin and others are the chief members of the body corporate, and it is difficult to say what may not be done by such a body, impelled by such a progressive spirit as the Rev. H. R. Peel. It is needless to say that our visit with this gentleman and his excellent family was extremely pleasant. We enjoyed it beyond measure. "Abbott's Hill" is the name of his residence, and with its magnificent grounds (some 300. acres), commanding prospects of charming scenery, and

delightful atmosphere, it is a fit place for the happiness of a family, where every wish is anticipated and every wish is enjoyed to its fullest extent. We had the pleasure of visiting "Shendish," the residence of A. H. Longman, Esq., who is a noted breeder of short-horns, hounds and horses. He has the "Old Berkley" pack of hounds justly celebrated for ages. They formerly belonged to Lord Fitz Hardinge, and his territory for them extended from London to Berkley Castle, in Gloucestershire. Mrs. Longman is a progressive lady apiarist, and of course we interviewed her bees. She had an agricultural show on the estate on July 29th, and had we not a previous engagement we should have attended it. We shall long remember our visit to "Abbott Hill" and "Shendish."

The festive "at home" at the fine residence of Thomas W. Cowan, Esq., at Horsham, near London, in the shape of a grand banquet was really one of the events of the season. Mr. Cowan is an enthusiastic apiarist and a very agreeable gentleman, and with his lady gave the opportunity for the prominent bee-masters of England to meet their foreign visitors, and have an enjoyable feast both of body and soul. The weather was delightful, and all appeared to enjoy the occasion to its fullest extent. The foreign visitors were Mons. Dennler, editor of the Alsatian *Bienenzuechter*, of Strasburg, accompanied by Col. Pearson, of Strasburg; Herr. C. J. H. Gravenhorst, of Brunswick, Germany, and one of the most prominent of German bee-masters, and the editor of the AMERICAN BEE JOURNAL. During this enjoyable occasion the whole company were arranged in a group, and photographed—the foreign visitors occupying the foreground, backed up by the English apiarists who were present. In the course of the afternoon the silver medal of the British Bee-Keepers' Association was awarded to each of the foreign representatives in honor of their visit and



as a memento of the occasion. The speeches after the dinner were highly complimentary to America, her scientific inventions and practical methods in apiculture, and we have the satisfaction of knowing that British bee-masters are our steadfast friends, and may be relied on to do their part in the grand work of adopting scientific management both for bees and honey production. They will work side by side with Americans for great and glorious results—for we are brothers, all—with one language, one object and one interest. All honor is due to Mr. and Mrs. Cowan for projecting and carrying out to such an agreeable termination such an excellent international reunion of the friends of the honey-bee.

### American Honey in England.

In the *British Bee Journal* for August, we find the following article and editorial comments :

We beg to thank you, and through you the other members of the acting committee, for the fair and courteous treatment bestowed upon our display of American honey at Kilburn. The judges manifested an honest disposition to pin the colors where they rightfully belonged, and it will always be a pleasant recollection that after patient and thorough investigation the highest prize for the best pure honey was given to that we displayed. The quality of our season's shipments has been so frequently and seriously aspersed that perhaps a firm with less heart in the business would have folded their tents, like the Arabs, and silently stolen away. But we have faith in American bee-keepers, and knowing their honey to be a first-class, meritorious article, we have never abated for a day the struggle to place it in the very front rank ; and now, after a hard fight, we are abundantly rewarded by an order from Her Majesty, the Queen, the quality of our honey complimented by both their Royal Highnesses the Prince and Princess of Wales, and by its being named the purest and best by such eminently respectable judges. Encouraged by this, and the satisfaction of the public as manifested by the constantly increasing demand for our honey, we have determined to locate a permanent branch in London, where we expect to build up and maintain a good trade in the products of the little almoners of nature, thus effecting a benefit to the bee-keeping industry, not only in America, but also in Europe.

Yours faithfully,

H. K. & F. B. THURBER & Co.

London, July 12, 1879.

We received the above letter from Messrs. Thurber, the great American honey caterers for Europe, and we cheerfully publish it. We had "a good time" at Kilburn with Mr. Hoge, their agent, and did our best to improve the occasion, and with great pleasure acknowledge our obligation to him for his frankness in all matters connected with what has been a vexed question as between us and our American fellow-workers.

English bee-keepers have had great cause to deplore the fact that English honey merchants have for years foisted upon the public the tasteless outcome of Chili, as the finest product of the most celebrated apistical districts, and such "stuff" labeled "Narbonne," with sundry superlative adjectives appended or soaring in its behalf, led the English world to believe that such (properly named) "stuff" was the embodiment of excellence ; whereas it was simply cheap rubbish put up in gaudy attire, and sold at large profit, to the great detriment of the English honey producer. It cannot be denied, and, indeed, Mr. Hoge candidly admits, that the earlier consignments of American honey had been "treated," such "treating" having been at the instigation of the dealer to prevent the honey from solidifying, he, the dealer, being perfectly cognizant of the fact, it having been so stated on his invoices.

We do not wish to reopen the question, but with the treated honey in our mind we feel that we said no more than such transactions warranted, but with the present samples before us we have great pleasure in testifying to their general excellence. They vary as did the flowers in the various districts at the times when the nectar was gathered, and one may find in the "styles of honey," as the venders call them, flavors varying from a slight remove from golden syrup to the most delicate-flavored extract of white clover blossoms, the prices varying accordingly.

There are few people in the world who have not, at some period of their life—and many times, too often—written what they would, with a better knowledge of the facts, rather had not been committed to paper, and in this particular, *i. e.*, in regard to American honey, we are willing to withdraw anything which we have written which may be thought to impugn the integrity of Thurber's comb honey ; it is beautiful in appearance, and sufficiently varied in flavor to please all tastes ; and to increase its popularity we would venture to suggest that



every package should bear a number or name, which would ensure a purchaser of honey of an approved flavor, being able at all times and places to get other parcels of the same precise quality.

Some of our readers are aware that a few unkind remarks have appeared in the *British Bee Journal* in reference to American honey. We did not think them of sufficient moment to make any remarks in the *AMERICAN BEE JOURNAL* concerning them, feeling assured that when Mr. Abbott had obtained a better knowledge of Americans and their products he would most willingly make amends. This he has done, in the above editorial comments, and we now safely say that no better understanding could be desired than now exists between the *BEE JOURNALS* of both countries, as well as the bee-masters of both continents. Certainly, this IS "well."

### McPherson's Frame Holder.

We give an illustration of a very neat and ingenious contrivance gotten up by Mr. G. McPherson, of Chicago, intended to hold a frame while undergoing the process of a critical examina-



tion to hunt the queen, discover eggs or larvæ, cut out or insert a queen cell, or for any similar purpose. The frame holder is made of gas-pipe, and is so constructed that the lower portion turns in a socket made of the same material, and can be easily swung around for the pur-

pose of examining both sides without lifting the frame from the holder. The bottom is a broad disc with three countersunk screw holes, for the purpose of screwing on the top of a stand or box, which is provided with a single drawer about 8 inches wide, while the remainder (A) is left with an open surface, in which to hang the frames with bees as fast as examined. Of course the holder can be made any size as may best suit the hive in use.

### "Afloat."

The subjoined paragraph we find going the rounds of the press, and copy it only to show how many errors can be embraced in one short article:

Floating bee-hives are a success, as is proved by the experiment of an American honey dealer, who constructed a vessel to contain 2,000 hives, which he moved gradually up the Mississippi river from Louisiana to Minnesota during the spring and summer months, and back again as the autumn advanced, thus keeping pace with the blossoming of the flowers, and securing therefrom a good succession of blossoms at the height of the season all along the coast. The longest stay was made at St. Louis. Skilled attendants accompanied the vessel, and the honey was periodically extracted from the hives in a manner now largely adopted in America—by centrifugal force. The actual yield of this gigantic apiary has not been stated but it is said to have been enormous, some hives producing as much as 200 weight of honey.

1. The success of the floating apiary consisted only in expending several thousand dollars, from which no adequate return was received.

2. There was no "vessel constructed to contain 2,000 hives." Mr. Perrine, to whom allusion is made, had about 600 colonies of bees in his floating apiary, and they were placed upon barges.

3. He did not go as high up the river as Minnesota with his bees. Finding the scheme impracticable, like a prudent man as he is, he abandoned it in the neighborhood of Grafton, near the mouth of the Illinois river.



4. Owing to a series of disasters, he did not and could not "keep pace with the blossoming flowers."

5. The "actual yield of this gigantic apiary" was not enormous. On the contrary, the losses of bees were so great from drowning and other causes, that the surplus above the wants of the bees was nothing worth while.

As a source of profitable recreation, either for those engaged in professional pursuits or following the mechanic arts, we can think of nothing preferable to keeping a few colonies of Italian bees. The following paragraph we clip from *Moore's Rural*:

Bees, as requiring but little capital, afford a source of profit, and if closely observed, an endless amount of information and recreation. Where they can be had to work on shares, a few hives and honey boxes will be all that will be required for a start. The usual terms are to return to the owner at the year's end the old stock and one-half the increase.

### Why Bees do Work in the Dark.

A life-time might be spent in investigating the mysteries hidden in a bee-hive, and still half the secrets would be undiscovered. The formation of the cell has long been a celebrated problem to the mahematician, whilst the changes which the honey undergoes offer an equal interest to the chemist. Every one knows what honey fresh from comb is like. It is a clear yellow syrup, without a trace of solid sugar in it. However, it gradually assumes a crystalline appearance—it candies, as the saying is, and ultimately becomes solid. It has not been suspected that this change was due to the photographic action; that the same agent which alters the molecular arrangement of the iodine of silver on the excited collodian plate, and determines the formation of camphor and iodine crystals in a bottle, causes the syrup honey to assume a crystalline form. This, however, is not the case. M. Scheibler has enclosed honey in stoppered flasks, some of which he has kept in perfect darkness; while others have been exposed to the light. The invariable results have been that the sunned portion rapidly crystallized, while that kept in the dark has remained perfectly liquid. We now see why bees work in perfect darkness, and why they are so careful to obscure the glass windows which are sometimes placed in their hives. The existance of their young depends upon the liquidity of saccharine food presented to them; and if light were allowed access to the syrup it would gradually acquire a more or less solid consistency; it would seal up the cells, and in all probability prove fatal to the inmates of the hive.—*Selected.*

## Foreign Notes.

Translated from *L'Apiculteur Alsacien-Lorrain*, by Frank Benton.

### Comb Foundation—No. 5.

Liepvre, September, 1878.

MY DEAR FRIEND:—By means of an awl I make in each side-bar 4 holes, 2 near each other in the middle of the bar and on the same horizontal plane, the other 2 in the lower quarter of the bar. These 2 holes separated from each other by about 2-5 of an inch on the outside of the bar, approach as they go toward the inner surface of the piece, and meet on the median line so as to form but one hole. Having thus prepared the frame, I place it with the top-bar down, and let an assistant, a child if need be, hold it in position; I take my comb foundation and place the upper edge on the top-bar, permitting the same fingers that hold the frame to keep it in an upright position within the frame. I press a coarse needle threaded with cotton thread through one of the holes of the side-bar from the outside toward the inside, passing it over the surface of the foundation, through the other bar (from within out), then around through the other hole and across the opposite face of the sheet, it comes, at last, through the first bar from within out, and the two ends are knotted on the outside. The foundation is then solid enough not to need holding. The same operation is performed to secure the comb in that part of the frame where the other set of holes have been made, after which I pour a little melted wax into the angles which the foundation makes with the top-bar of the frame, and the whole is finished. When everything is at hand five minutes suffices for the whole operation.

I use the wax only at the top of the sheet because some curvatures are seen, though less frequently, in the upper third of the frame. Near the top I leave 5 millimeters (nearly  $\frac{1}{4}$  of an inch) play; below a little more. The threads hold the sheet closely, hence no curvatures are possible. The lower thread being near the bottom of the sheet of foundation, the latter will be no more inclined to bend about a horizontal axis than it is about vertical axes. The bees fasten the foundation during the first day or two and very soon destroy the cotton thread. You will offer as an objection, that in forcing the bees to gnaw away the two pieces of thread, I rob them of precious time. Come, come, my dear friend, do not spend time splitting hairs. In the first place, the thread is simply cotton, such as is used in crochet, and which is easily cut away by the bees; but why not remove it yourself as soon as you see that the industrious insects have rendered its presence no longer necessary? I must say, I have troubled myself little about this; such trifles which novices are likely to magnify, have never struck my fancy.

*They are very easily broken.* Yes, when one does not know how to handle them properly. They break when handling them if you work in the cold in winter; but who





forbids your working in a warm room? They break down in the hive likewise, if you put them in no matter when or where.

As a general rule do not fit out with comb foundation a hive intended for the reception of a natural swarm. Besides the excessive heat which the bees produce by their agitation and which softens the wax, being enough of itself to cause the sheets to fall down, do not forget that the new swarm suspends itself in thick clusters on the first combs, no one of which will resist the weight. I have experienced this to my sorrow, repeatedly. Natural swarms are to be placed in hives whose frames are simply furnished with guides. At the end of 5 or 6 days half of these may be replaced by foundation. As I have not found it advisable to place foundation in the outside frame, next to the entrance, I advise you to exchange frames number 2, 4, 6, etc., for those furnished with foundation. Less breakage is likely by managing thus. As to artificial swarms obtained by a removal of combs from colonies, do not hesitate to employ foundation where up to this time you have only used empty frames.

Another recommendation: Do not transport hives whose frames are occupied with incomplete combs built on foundation. In this case, as before, the heat due to the disordered movements of the bees, would make of the whole a complete wreck. Remove such combs and fill their places with empty frames. If they are already occupied with eggs, exchange them for old combs taken from colonies that are not to be moved, or else transport them in a box by themselves to the place to be occupied by the bees, and then after 24 or 48 hours, that is, when your bees shall have had time to become quiet, put them back. These precautions are necessary in order not to have losses to mourn over; but admit that they are easy to take.

*The bees build less readily upon them than upon a guide of natural comb.* That depends upon the place you give your frames furnished with foundation, and also upon the condition of the colony. If the stock is weak a frame of foundation placed in the back part of the hive will remain there some little time before being touched by the bees; the same thing would be true of natural comb. The position of the frame of foundation is so unfavorable that even a strong colony would hesitate a couple of weeks before doing with it anything worth speaking of; generally the bees would merely gnaw the threads and cut holes through the foundation, which would not exactly aid in the completion of the work.

It is best then (except in the case mentioned in Letter 3, AMERICAN BEE JOURNAL, page 202, top of right-hand column) to suspend the sheets of foundation in the midst of the brood nest as far as is possible and between full combs. Here the work will be carried on with a rapidity proportional to the strength of the colony, and to the youth, that is to say, to the prolificness of the queen. I challenge any one to show me at the end of a week a comb built with only a guide-piece to start with, containing one-tenth the eggs which my comb foundation will contain, the surface of which will be nearly all built out.

I scarcely need to say to you that in order to secure rapidity in the building out of the foundation, you must refrain from putting in more than two frames of foundation at one time, or you will have too much unoccupied space in the hive, which will injure the brood by scattering the workers too much. It is likewise dangerous, for the same reason, to place two frames of foundation next to each other; separate them always by a full comb. There is one condition without which there can be but little success; I wish to insist upon this point, that is, to operate only with colonies having young queens. It has been observed, indeed, that the more prolific the queens are, the more industrious and inclined to build worker cells their subjects are. Now, here you offer them exact foundation and half the work done; with an old, failing queen the bees seem to feel that there are few zoospemes in reserve and that the greater part of the eggs will be unfecundated; whence, less activity; the affair is settled; and, furthermore, there exists an instinctive propensity to construct drone cells. Your worker foundation will then be worthless to them, I will say quite in their way, your bees will prefer by far a mere bit of natural comb in the top of the frame where nothing will hinder them from building down drone comb at their leisure.

I need hardly add that in order to give good results, comb foundation should be used when the bees are working freely and when laying is active, from the 15th of April to the 15th of August. Before or after this you will obtain no benefit—no more than with simple starters.

Thus you see, by following certain rules, in this as in other things, success is sure. I do not think M. Pellenc, little inclined to favor the use of movable combs anyhow, has carefully tested such a course as I recommend to you in this letter; his conclusions, taking for granted his intelligence and skill, would have been very different.

Here, my friend, is the case fully stated. It rests with you to decide whether a change of opinion is necessary. In my next letter we will talk about the adaptation of comb foundation to box hives, and we will examine together an objection, which, I believe, is brought up very commonly. I refer to the price of foundation—much too high, especially for the modest purse of the peasant. By giving to the latter a method by which he can manufacture his own foundation, perhaps I will still come out ahead in the discussion. I hope so, as I likewise hope you do not feel it necessary, financially speaking, to follow me through to the end.

DR. REISSER.

☞ The weather in Great Britain, as well as in Continental Europe, has been so wet and cold that no honey was gathered up to the end of July. There will be a good market for American honey in Europe this season, which with the limited honey yield in this country, will cause prices to advance.



## Correspondence.

### For the American Bee Journal. Preparation for Winter.

G. M. DOOLITTLE.

Having our honey all disposed of, as given last month, and our nuclei united, we are ready this month to fix our bees for winter. In some localities, where fall flowers are abundant, it may be well enough to defer getting the bees ready for winter till next month, but with us we rarely ever get any honey after the 10th of September. We consider that the earlier bees are prepared for winter after honey gathering is over the better they will winter. The first thing to be done is to see that all have honey enough for their use during winter and spring, until flowers open again and this should not be less than 25 lbs., and 30 would be better. If we wish to feed in the spring, 20 will do. To ascertain the amount of honey, lift the frames from the hive and count off the number of pounds, or weigh a hive containing empty combs and add 5 lbs. to it for pollen and bees, then have your bees all weigh from 25 to 30 lbs. more than this. There probably is no better way to winter bees than to put them in a good under-ground cellar. Still, we prefer to winter about  $\frac{1}{2}$  in the cellar and  $\frac{1}{2}$  out on their summer stands, so as to be sure of being right somewhere, like the farmer who puts in a variety of crops, as all are not likely to fail the same season. Some years bees winter best in cellars, and again out-doors. To this end we built a cellar to hold about 100 colonies in a bank close by, and have had good success therein. The mercury in it has not been above 46°, nor below 41° since we built it, during the time the bees were in it.

Bees should be put in the cellar during the first half of November, and when the hives are dry and free from frost, if we wish them to winter well, for we cannot expect them to winter well if they are made damp from any cause whatsoever. Carry them in so as to disturb them as little as possible, and after they are in leave them quiet as you can until the pollen is plenty in the spring. Those on summer stands have all the boxes removed and the places used for the side boxes packed with chaff or fine straw. It should be well pressed in so as to fill into all the corners. Fill the caps also and press it in thoroughly, or use chaff cushions if you have them; yet I hardly think them

enough better to pay for the cost in making them. During winter keep the snow away from them so the cap is always in sight. After our experience of last winter, we believe that bees should not remain out of sight in snow for a great length of time. Give them a chance to fly every time it is warm enough, remembering that a bee can get off melting snow as easily as anything else, providing it is warm enough to raise the mercury to 45° in the shade with it still and the sun shining; otherwise the mercury should mark 50° or above.

As to the safety of wintering we would say that if the bees have a chance to fly once in 5 or 6 weeks they will usually winter well; while if they have to contain their feces for 4 or 5 months there will be great mortality throughout the country. This constant eating with no chance to void the feces for 5 months in succession, during a cold winter on the summer stands, seems to destroy the vitality of the bees, and makes spring dwindling a necessity. Some feel disposed to call this a disease or the dysentery, but we can hardly see things in that light.

Now, we have given you in short how we conduct an apiary during the year, and with this comes the conclusion of our series of articles. Our next will be our report for 1879.

Berodino, N. Y., August, 1879.

For the American Bee Journal.

### Comb Foundation

JAS. HEDDON.

I have been using some few hundred pounds of the above, this season. I believe I have this year, for the first time, used pure beeswax foundation. If the 150 lbs. I had made up for me last year was pure, then there is a great difference in wax.

Now, I will tell you what my experience has been up to date during 1879, and state that the conclusions I have formed are about these: Whereas full sheets of foundation in every frame, for new colonies, will secure straight worker comb, I will advocate its use at 50c. per lb., whenever we can invent some practical and off-hand method of holding it in a true position all the time the bees are drawing it out, so that we can prepare our hives, run in the swarm and know that all will go straight, true and right in all kinds of weather. Until such method is discovered, I cannot advise the use of a piece over 3 inches wide in a frame, unless the apiarist has





plenty of time that he can devote to working with the bees every other day.

With proper management the "sagging" that we hear so much about can be readily put up with, and will do no material injury, but the warping, twisting and kinking is the trouble which we must seek to obviate. This season I found that to mash a thin strip of wood about  $\frac{1}{4}$  inch wide onto the bottom of sheet (which is cut  $1\frac{1}{4}$  inches short in the Langstroth frame) would prevent waving or warping; but then one end would move out of the frame one way, while the other end went the opposite way. Then I cut a slot 3-16 of an inch wide and 2 inches long in the center of the lower end of the end bar, and let these stiffeners run into them. This was all right early in the season, but later when the bees began to gather propolis more profusely, of course, they glued these ends fast in the slots, just as I feared they would when I first got the thought. I will recommend this method to those who are not in a very gluey location and for swarms that issue early, or when honey is plenty in the fields. I have not experimented with it as much as I mean to another season.

I have reference entirely to the Wagner or Perrine foundation as made on Novice's machine, and also to the Dunham foundation, which I am testing on a large scale to satisfy myself of the comparative merits between it and the old style. The flat-bottomed wired foundation I leave out of the list, as its price is, in my opinion, beyond the practicability of its use, and I do not as yet understand that the point of the queen avoiding the wired cells and these wires destroying the brood if she does not, to be a settled problem. I have not tried it. I think that if foundation is made just right, of pure wax, and the conditions in the apiary are also right, that the bees will thin the base is certain, and that an expert will have trouble to find out whether any foundation was used or not. It is undoubtedly true that different runs of wax, disposition of bees, kinds of weather, make of foundation, etc., etc., fully account for the different conclusions and reports in regard to the use of foundation. I would say let us use no foundation for surplus honey, unless the conditions are right to avoid the "fish-bone" base and that the wax was made from comb as clean as honey. I allow all my extracted honey to be capped over, you will remember, and from these cappings I have made over 100 lbs. of clean, white wax and foundation this season. This we may put into sections in as large or small guides as we

may feel that we can afford and have enough to go round.

The best plan for cutting foundation, that I know of, is to mark the patterns on a board (let your marks run out longer than the sheet) and lay from 10 to 20 sheets down true on this board, and then with a thin, wet knife cut clear through on said marks by the use of a straight-edge. I can cut more foundation thus in one day, than 1,000 colonies will need in one season.

The method we prefer to fasten it to frame or section is the "mashing down" system, shown me three years ago by Mr. Perrine, while visiting my apiary. One of my men here put the foundation into 200 sections in one hour. It will pull in two elsewhere before it will loosen from the bar when properly mashed. The bar must be dressed smoothly, and the putty-knife honeyed often when mashing.

Notwithstanding the extent of my interest in honey raising, I have not as yet purchased a machine, but expect to next spring, hoping that this season's experimenting will enable me to decide upon the best one.

Dowagiac, Mich., Aug. 11, 1879.

## Bee Stings.

DR. GEORGE HOBBS.

Nearly 20 years ago I lived in Western Ohio. Our family consisted of my wife and myself, a little girl about 3 years old and a little boy a babe. One day my wife started on a visit on horseback intending to return in the evening. I helped her on the horse and went probably about 30 rods distance with her to let down the fence for her to pass through. During the time we left the children in the house, thinking they would not be likely to receive harm till I came back; but to my great surprise on returning to the house I found the little girl had made her way to the bee-hives, and I suppose had thrust out one of her arms into a hive as it stood up some distance from the ground, and in this way had stirred up the bees. When I took her into the house she was suffering extremely from the great number of stings which she had received. I took her up on my knee, and counted the number of stingers as I pulled them out from her face, arms and neck—I found 33,—and afterwards discovered that there were as many more in her hair.

Of course, this looked to me like a very serious injury—enough to cause her death, if I could not adopt some mode of treatment that would be very



effective. I had not been in the habit of using medicine in my family in a long time, but depended entirely upon water. After pulling out the stingers, I stripped the child, filled the tub half full of water, right cold from the well, and placed her in it for about a minute; then took her out and wrapped her in a sheet and put her into the cradle. I repeated this process, bathing her about 3 times, 10 minutes apart, and had the satisfaction of seeing it alleviate her sufferings. After I had bathed her 3 times and wrapped her up warmly in the sheet, she dropped to sleep and did not wake for about 20 minutes. Then the fever and pain woke her up, and I bathed her again. After two more such baths she slept soundly, and on waking seemed to be nearly recovered. By the time her mother came home that evening, she was able to be around with scarcely any marks of the stings upon her person. I do not believe that any other than water treatment would have brought about such a good result in so short a time.

### Drone-Killing Birds.

We find the following from the pen of a practical bee-keeper, in the *Pacific Rural Press*:

I have followed raising bees for the last 7 years, and made it my only occupation. I at one time thought the bee-bird was destroying my bees, and what to do to get rid of them I did not know, for there were hundreds of them in the spring building their nests in the oak timber, under which my bees are sitting. After watching them very attentively for several years, I discovered they did not eat the working bees, but fed on the drones. Around my house, and for 300 yards below and above, there are small oak trees, under which my bees are sitting. I can sit in my door and see hundreds of bees coming in and going out of the hives, and sitting on twigs are half a dozen bee-birds. They paid no attention to the working bee, but as soon as I would hear a drone I could see one of the bee-birds give a swoop and capture him. A drone is much larger than the honey bee and they make a louder noise, and can be easily seen and heard at a distance. In place of the bee-bird being an enemy to the working bee, he is their friend. He is a protector of the poultry yard; a crow or hawk dare not come near my premises. If a stray one should come this way, he will be certain not to try it again. The bee-bird is the king and terror of the feathered tribe. As soon as they and the honey bees kill off the drones, the bee-bird disappears and you see him no more until the next spring. Some people kill the bee-bird and examine his craw, and find bees in it, and that is sufficient evidence to condemn him; but if they would be more particular they would find the food to be drones. This is my experience and my conviction.

For the American Bee Journal.

### Another Bee Enemy.

A. J. COOK.

From some bee-keeper of Louisiana, whose letter I have mislaid, I have received another predaceous fly. This species much resembles *Asilus Missouriensis* (see Manual of the Apiary, fig. 108); but as will be seen (fig. 1) does not belong to the genus *Asilus* at all, but to the genus *Erax*. In this genus the third vein of the wing (fig. 2, C) is not forked as in the genus *Asilus* (see Man-



Fig 1

*Erax.*

ual, 4th ed., fig. 130), but a disconnected branch (fig. 2, E) is always present, which is connected with the 3d vein by a short cross vein. In the allied genus *Promachus*, which includes the Nebraska bee-killer; *Promachus bastardi* the 2d vein forks (see 4th ed. Manual, fig. 129). In *Erax* (fig. 3) as in *Asilus* *Promachus* and *Mallophora* (see 4th ed. Manual, fig. 128) the 3d joint of the antennæ ends in a bristle. The species



Fig 2

Wing of *Erax*.

of *Erax* are usually smaller than the one in question, which is drawn natural size in fig. 1st. Only a few days since I caught a species of *Erax* three-fourths of an inch long, which was sucking the vitality from a common house fly.

I can find no description of the Louisiana *Erax* or bee-killer, so I subjoin the following. Length  $1\frac{1}{4}$  inches. General color gray, with feet or tarsi, eyes, base of beak, and portions of the dorsal surface of each abdominal segment as represented in fig. 1 are black. The back of the thorax is dark gray, with two heavy black longitudinal lines in



the middle, which are separated in front by a narrow gray line. There are numerous black hairs on the femurs and black spines along the tibia. The empodium (see 4th ed. Manual, fig. 131, C) is very slender. The specimen described is a female.



Fig 3

Antennæ.

We thus see that we have five genera of this family Asilidæ, whose species are bee-destroyers: *Asilus*—*A. Misouriensis*; *Promachus*—*P. bastardi*; *Mallophora*—*M. orcina* and *M. bomboidea*; *Laphria*—*L. thoracica*, and now *Erax*—species unknown.

In the magnificent volume by Townsend Glover, "*Diptera of North America*," there is figured the male *Erax æstuanus*, which resembles the species in question somewhat, but the female also figured is very different.

### Queens Duplicating Themselves.

A. F. MOON.

In an article, about one year ago, in speaking of queen breeding, we gave our experience that we had thus far been unable to see a queen of the Italian race that would in every instance duplicate herself in "color," while we have bred from the best apiaries in the United States and both Italy and Germany, and firmly believe they vary as much in color as the human family. We also said in that article that we did not breed queens that would duplicate themselves every time in color.

To these facts exceptions were taken by several who wrote they had queens that would duplicate themselves every time: also my old friend Alley, from Wenham, Mass., loomed up and gave the readers of the JOURNAL what we had said, stating that he bred such queens and bred from no others, and hundreds of his customers could testify to the fact of his superior blood. Upon these statements we made a proposition to any one who would send to the editor of the AMERICAN BEE JOURNAL one such queen, to raise 12 queens from, and should the 12 prove duplicates of the mother, we would send him two fine colonies of Italian bees for his queen, etc.; and for causes best known to those parties claiming to

have such "stock," no queen was sent, and the readers are left to draw their own conclusions.

Among the hundreds of friend Alley's customers, referred to as proof of this matter, if there is one of them that will please come forward and demonstrate the fact and give the price of such a queen, the bee-keeping fraternity would greatly be relieved from what many now consider a great humbug. Mr. Editor there are only two things to be considered in this matter, viz: If the advocates of these principles have got them, they certainly must know it; if they have not, they know that also. And why the request should be for one year ignored, is now what many would like to know, and the people don't want A, B or C's say-so, they want the proof, and it only takes one of those \$2 queens to immortalize themselves. What say you? Will you come to the front? If not, forever hold your peace, and draw in your flag.

#### PROPOSITION.

To any bee-keeper who will send to either of the parties named, Mr. A. J. Cook, Lansing, Mich., or James M. Marvin, of St. Charles, Ill., one pure Italian queen, which shall be put under a test of raising queens; shall raise 12 young queens, and should the 12 queens raised be duplicates of their mother in color, we will bind ourselves to pay \$25 apiece for such queens purely mated. Further, the parties who make the test shall have the privilege of selecting a good competent judge, with him to decide the merits of the case; and still further, we will bind ourselves to pay the committee for trouble of making the test requested, to be made immediately.

The only test of purity in this matter we ever have found reliable and of true merit is, the uniformness of the worker bees; this is a reliable test. Of all the imported queens we have raised and seen this year, they vary in shade of color, while the workers are of the finest and most uniform in color and markings. We have bred some young queens from selected imported queens, and they also vary much in color. It's the experience of nearly all practical queen breeders that every succeeding generation, bred in this country, grows lighter in color—probably climatic influence.

Rome, Ga., Aug. 8, 1879.

☞ During the month of September much patience is required in the apiary. As the honey harvest draws to a close the bees become much more irritable.



For the American Bee Journal.

## Bee Matters in Canada.

REV. J. ANDERSON.

Perhaps a few items from Canada anent bees may be of some interest to some of the readers of your valuable journal. There has been, during the latter end of last winter and the beginning of spring, a very great mortality among the bees in this province. This I believe was owing to the mildness and length of winter. My bees were 5 weeks longer in confinement last season, than they were the previous season. Four months and one week was a long time to be imprisoned. The result was I lost 4 colonies out of 54 put into winter quarters. Those 4 died for the want of food. They had not a particle to live on, and the stores of others were on the eve of being exhausted. In fact, they consumed a third more food than on ordinary winters.

I find the Langstroth hive, which is pretty well known in this province, to be a most excellent hive for summer use; but a most wretched concern for wintering. For over 12 years I have been experimenting with it, using every recent invention commendable in order to secure success in wintering, but I am sorry to have to say that I failed. It seems to me that it is too shallow to allow the bees to form themselves into a proper cluster, which is so essential for winters such as we have here; hence the bees are in a constant state of restlessness; either too warm or too cold, till finally they are siezed with the stillness of death while an abundance of food is all around them. But perhaps there is some special way for wintering bees in this hive; if so, the person who describes it in the JOURNAL will merit my thanks.

This season I met with rather singular things among my bees. I have just now a colony of pure Italians which lost its virgin queen about a month ago and refuses to raise one. Three times I gave them combs with fresh eggs to raise a queen for themselves, but they refused to do so. In the first piece I gave them, they commenced to build cells, but before they were sealed over they gave them up. In my last attempt to aid them, I gave them a frame full of fresh eggs and brood in all stages, but they made no attempt to build any cells. Being certain that they have no queen and as certain that they are unwilling to raise one, I purpose offering them a queen in a day or two, which may discover a little more of their freaks. But is not this a very

singular case? It is in my experience.

Yesterday I killed a young and very beautiful Italian queen. She was just a month old, and had everything during her whole life as favorable as could be wished; nevertheless she did not lay one single egg that I could see. Her barrenness wore out my patience, and consequently I destroyed her. Indeed, her own subjects seemed to have been disappointed, for they kept a large number of cells empty for her eggs, and had them as clean as they could be for weeks, nor did they appear to be in great sorrow at her death.

A few days ago in making a young colony from a very strong one, I took the queen—to which I attach a great value because she invariably duplicates herself—with a large number of her bees, and placed them in another hive prepared to receive them, where I placed a frame with brood to make them contented in their new home. Having removed the old home from its stand to a new locality, I placed the new hive with queen and bees in its stead. In a week's time I visited the old home of my queen to see what number of cells I might expect. But to my surprise, not a cell could I see; but the combs were full of eggs. While looking at those eggs with feelings of disappointment, the very identical queen which I placed in my new hive passed before my eyes.

Tiverton, Ont., July 19, 1879.

For the American Bee Journal.

## Virgil and the Honey Bee.

W. O. CARPENTER.

The July number of the AMERICAN BEE JOURNAL contains two very interesting articles, one from T. L. Fraser on "The Primitive Home of the Italian Bee"; the other from Prof. A. J. Cook on "The History and Use of the Bee Smoker." Both are more or less classical productions, and at once reminded me of my school-days, when Virgil is read more as a task than a pleasure; it will nevertheless well repay any of your classical readers to peruse the 4th book of Virgil's Georgics, which is entirely devoted to the culture of bees. With regard to the primitive home of the Italian bee, as Virgil was then residing in Etruria, and his time a good deal divided between Rome, Brundisium and other Italian cities, I take it he had every opportunity of seeing and learning all about the nature, quality and location of the Italian bee, which he most emphatically describes in opposition to the common or black bee in the





following lines, first alluding to the kings after severe combat: "Having withdrawn the kings from the battle, kill the one which seems of the most degenerate kind, and let the more valorous reign alone in court. The one will be glowing with refulgent spots of gold, for there are two kinds. This is the better distinguished both for his form, and gemmed with glittering scales. The other is hideous with sloth and ingloriously drags a ponderous stomach." As regards the progeny: "The others shine and sparkle with brightness, burnished over their bodies with gold and regular marks; these are the best breeds; from them, at the stated time of the year, you will press the luscious honey." I think, therefore, there can be little doubt as to the color, quality and location of the Italian bee. Virgil has no doubt fallen into some inaccuracies, such for instance as calling the queen the "king," being under the impression the workers were all females, and imagining that bees were manufactured from substances gathered in the fields; but on the whole it exhibits a surprising degree of knowledge for that period. He mentions even the method was adopted of clipping the queen's wings to prevent swarming: "But when swarms fly fitfully and sport in the air without any fixed intention, disdain their hives and leave their abode cold, you will restrain their unsettled minds from this useless play; nor is it any great labor to curb them, you have only to clip the wings of their kings."

Then, again, in reference to Prof. A. J. Cook's paper on "The History of the Bee Smoker," Virgil has the priority over Columella, the great naturalist of Cadiz, whose writings, are some forty years subsequent to Virgil. One would almost imagine Virgil was describing the rag smudge so recently in use: "If at any time you intend to rob their narrow mansions and the honey preserved in their treasures; having first sprinkled them with a draught of water, extend your hand and with your mouth blow forward the persecuting smoke." It does not appear that killing the bees for their honey was practiced at that period.

The *finale* of the book is perhaps the most amusing, where the poor shepherd Aristeus, having somewhat interfered in the plot of rescuing Euridice out of the infernal regions by her husband Orpheus, had all his bees, which were his only means of support, destroyed by the nymphs of the goddesses.

Orpheus tickled his harp so well  
He lured Euridice out of hell;  
Had she been as good as she was fair,  
How the dickens did she get there?

Well, the upshot was, the poor fellow after great supplication had to propitiate the gods by the sacrifice of four young bulls and four two-year-old oxen, with orders to stop up their nostrils and revisit them in fourteen days, at the expiration of which their decomposed carcasses emitted clouds of bees, and he was again made happy. No doubt wild bees having been known to make their dwelling place in the skeletons of dead animals, gave the origin to this legend of the generation of bees, and to show how this false notion prevailed, in a herbal printed in London, in 1665, there is a large engraving representing all the stages of this method, with directions in sober seriousness.

I fear I have trespassed too much on your valuable space and indulged in a subject that may be uninteresting to the generality of your readers. If so, you know what to do with it.

A singular circumstance occurred as I was taking a very late swarm this afternoon. One of the bees stung me on the ear very severely; my daughter, who was standing by me, pulled out the sting, which fell upon her wrist and stung her. I have often noticed a convulsed motion of the sting after extraction, but I should hardly suppose it would retain sufficient muscular power to sting a second time, but it did. Being late in the evening, the bees were unusually savage, and my gloves were literally covered with stings.

Lawrence, Kan., July 12, 1879.

For the American Bee Journal.

### What Is the Italian Bee?

THOS. L. FRASER.

In considering the ethnological and commercial history of the Greeks and Romans, I am induced to believe that the Italian bee is a hybrid, the product of the German and Egyptian varieties. My reasons for this are the following: The black bee from its spontaneous emigrating habit, from the earliest dawning of their history, accompanied the Germanic races and probably preceded them in occupying the forest wastes of Western Europe: and as the Greeks, Romans, Ionians, etc., were of Caucasian origin, it is probable that the black bee preceded all others in those countries, but when Cecrops founded Athens and introduced art, refinement and letters into Greece, it is probable that the Egyptian bee, already domesticated, was introduced by their masters and naturally fraternizing with the black bee, a hybrid was the result.

Again, the Egyptian bee held in the



domestic state by the Egyptians, Phenicians, Hebrews, and perhaps Chaldeans, and lastly by the Carthaginians, were introduced by the last named into Sicily, Spain and such other countries of Europe as were conquered by them, and so ample opportunities were afforded hybridizing with the black bee already domiciled in those countries. This presumption could be so easily tested by importing the Egyptian bee into this country and Europe, that I have been induced to offer these thoughts that should you deem them worthy of a place in the JOURNAL, some of your correspondents and readers, better qualified and prepared than myself, could, if so disposed, test the supposition.

The similarities in color, appearance, form and habits of German, Italian and Egyptian varieties, when taken in connection with these facts in history, confirm one in the belief that it would be well worthy the effort on the part of the scientific apiculturist to test the matter, and to show (may be) by actual experiment the origin of what is considered a distinct variety of the bee. Had Mr. C. O. Perrine imported the Egyptian bee for the purpose of trying his experiment with the floating apiary, I am induced to believe that its results would have been more flattering and encouraging.

Among the many varieties of *Apis mellifica* kept by bee-venders and the amateur and scientific bee-culturist of the United States, none I believe have imported the Egyptian bee either for the purpose of experiment or profit.

Santa Ana, Cal., July 21, 1879.

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For the American Bee Journal.

### From Southern California.

G. F. MERRIAM.

It is now universally conceded that Southern California will not only not produce any surplus honey for market, but that one-third of the colonies will at the end of the season be entirely out of honey. The season has been very much like that of 1877, when so many starved out. There has not been a more brilliant prospect of a fine season within my knowledge, than we had up to Feb. 20th. We had but 3 rains last winter, one each the first of January, February and April, giving us a total at my apiaries of only  $7\frac{1}{2}$  inches. The spring passed without any of our usual fogs or dews, and instead of rains we had the resultant dry weather from storms on the desert, notably one the

last of March and the other June 1st. During the first one the thermometer went up to  $100^{\circ}$  in the shade, while the last it was  $110^{\circ}$  with not a particle of moisture in the air. White sage was then in full bloom, but this storm burnt it out, as well as nearly all other honey plants.

I do not recall any discussion in regard to the use of water by bees during very dry weather. Surface water is a long distance from my home apiary—so far that I have always watered the bees from troughs made on purpose. During one of those dry days, when the mercury stood over  $100^{\circ}$  from 9 to 4, they carried 42 galls. of water from a trough 8 ft. long and 14 in. wide, and they got water from a dozen other places at the same time—were coming into the house after it and perfectly besieged the well water tubs and barrels. Is it not possible they drink it like animals and carry it to cool their hives after the manner of other people sprinkling the floors to cool their house? It is fortunate in one respect that this is an off year, for the price of honey is so low that if we had produced a crop this year we could not have got the cost of the boxes and cases back.

Good extracted honey for some time has been 3c. in San Diego. Our barrels cost us \$2 each and hold an average of 270 lbs. net. Add to this the freight on the barrels to and honey from our apiaries, the honey does not net us quite  $1\frac{1}{2}$  c. per lb. It strikes me that such prices, with 5c and 7c. for comb in section boxes, the business as a medium of providing the apiarist with the means of gaining a living for himself and family is played out. It is below the cost of production of manual labor, if skilled labor is of any value in these days.

It will result in driving all amateur bee-keepers out of the business, leaving it exclusively among practical men who make it a business. During the flush years of 1872-3-4 very many of the business and professional men of the time bought bees and hired men to attend them. The result has been even more disastrous with them than with the rest of us who make a profession of the business.

Large quantities of honey were shipped last year to England and Germany under the impression that in that market a fair price could be realized. Extracted honey in barrels was shipped around the Horn on sailing vessels, but so far as I can learn, the venture has not fulfilled the anticipations. One German house made an advance of about  $5\frac{1}{2}$  c. delivered in Liverpool, England. Consignees then had to pay





freight about as follows:  $\frac{1}{2}$ c from the apiaries to San Diego, the same by steamer to San Francisco and the same again to Liverpool or Hamburg, making  $1\frac{1}{2}$ c. total, or giving them 3c. net counting barrels at cost. I understand that even this amount is not likely to be realized, and that consignees will draw back for amount of over-drafts.

Americans as a rule are too persistent and enterprising to allow one mistake or disaster to deter them from future efforts in the same or other directions in finding a market. Our barrels are all made of sugar pine, and until lately bound by 14 wooden hoops. Now there is a new kind with a less number of iron hoops.

Last year during the height of the season one concern in San Diego desiring to have a part of the barrel trade, which was then in the hands of a responsible commission firm, tried to bulldoze them into dividing the profits under a threat of throwing another make on the market. Not succeeding, they brought on a large lot of fir and spruce barrels which never could be made tight. I was swindled with a lot of them, and after pouring about a dollar's worth of wax in each, sent off some, but they leaked all the way to market. All kinds of receptacles for honey have been tried on this coast, and nothing has been found except tin or sugar pine which will hold it. We usually take out the bungs and tip at an angle of  $45^\circ$ , then pour about half a teacupful of melted wax in each end, turning the barrel around so as to wax the entire chine. Then, unless we leave them out in the sun or fill too full we have no trouble with leakage.

I saw a new extractor in San Diego recently, intended to extract 6 frames at once without turning. Each frame is put between 2 wire screens which hang like a door. To turn, one of these is turned half way when all can then be turned to place. When perfected it will be the means of expediting the work exceedingly. The gearing is so constructed as to prevent all wabbling, which now occurs in other machines when combs of unequal weight are put opposite each other.

There is at this writing a vast number of flowers, but they secrete so little honey that the bees get very tired while trying to get a load. In passing a mass of flowers one will see the bees rise languidly and lazily as if they thought it mattered little whether they found another flower or not. They seem completely discouraged, and lose many of the usual attributes of bees.

I noticed in a late JOURNAL that honey

from horehound is reputed to be bitter. That plant grows here in places near the coast, and will thrive almost anywhere. It is so easily grown from the seed that I have a quantity gathered, intending to sow it on some waste land provided I can learn that it will not prove bitter. Who of your subscribers can answer this question?

I had occasion to remove some of my lightest hives a few miles, in the hope that they might get enough to go through. They did very well—quite contrary to the predictions of some who told me they would use up all they had, and not do as well as if let alone.

I notice a complaint that veils injure the eyes. It is so in my case as well as others here who use them nearly all the time. Some fasten a piece of glass in front to give a clearer view of the work as well as to obviate the strain on the eyes.

I inclose some seed of the blue sage, button sage, purple sage and several other named sage. It is our best honey plant. The only objection to it is, it comes on during swarming time when its wonderful product cannot be utilized to advantage. It will stand quite cold weather when in bud.

San Luis Rey, Cal., July 20, 1879.

[The seed came safely to hand. A portion has been forwarded to Prof. Cook, the remainder we will plant this fall and in the spring, as suggested by Mr. Merriam.—Ed.]

For the American Bee Journal.

## Honey Resources of Florida.

A. B. BEALL.

Probably a few items from the "Land of Flowers" may be of interest to you and your readers. Practically I am a novice in apiculture, having but recently commenced the business on a small scale. I have read and studied the standard authors, Langstroth, Quinby and Prof. Cook, and back numbers of AMERICAN BEE JOURNAL. Considering your advice as *ex cathedra*, I have adopted the Langstroth hive. With my short experience and a careful study of the description of many kinds, and observation of some of them, I am convinced that it combines all the essentials to successful bee-keeping in this climate. But I wish to write particularly of the adaptability of this section for the business. Perhaps you will think my views necessarily crude, but they are based upon the opinion of those who have been keeping bees in



box hives for a number of years, as well as upon a few months' personal experience and observation, and should, therefore, be received *cum quano salis*. The box-hive men say that 50 lbs. of honey per hive is an average yield for good years. You can probably determine from this data what would be the yield with improved hives and good management.

I saw a statement in the JOURNAL from a Mr. Bayard, of this county, to the effect that bees could not make comb here after June 1st. I do not wish to discredit Mr. Bayard's statement, which is doubtless true when applied to his and similar localities, but it does not apply to the one in which I reside. It is a well-known fact that bees can build comb when they can obtain honey, even when confined, wax being simply a secretion from saccharine matter. But to facts. My bees have been building comb quite rapidly during the past and present month. A case holding 8 sections put in the brood chamber of one of my hives about the 1st inst., was filled with comb and honey in 10 days. A colony hived from a tree a few days since, are now building comb satisfactorily.

There are only certain localities of this county that are naturally adapted to bee-culture. I have little or no acquaintance of the State beyond the limits of Orange county, though I think the statement will hold good of all peninsular Florida. A far greater area of this county is covered with pine timber, interspersed with beautiful clear-water lakes. This portion is well adapted to the growing of semi-tropical fruits, and affords delightful places of residence for those engaged in their cultivation, but it is not at present suited to bee-keeping. When the numerous orange, lemon and other tropical fruits, now being cultivated, come into bloom and bearing, its character will be materially changed and bees may be kept with good results. The best results are now obtained in the vicinity of hemlock and swamp lands, which generally border the large lakes, the St. John's river and smaller streams.

I will give you a list of the honey-producing plants and the order and duration of their blooming, so far as I am acquainted with them from a limited and casual observation: January—Maple, about a month. February—Pennyroyal, about 6 weeks; orange and lemon, 1 month; willow, 3 weeks; oak, dewberry, 3 weeks. March—Alder, nearly all the time; oak; blackberry, about 3 weeks. April—Blackberry, al-

der. May—Low palmetto, until July—very nice honey; magnolia, 6 weeks; variety of bays, 1 month; gallberry, 3 weeks. June—Low palmetto, magnolia, bays. July—Cabbage palmetto, about 1 month—very nice honey; partridge pea, duration of bloom unknown.

The pennyroyal, so-called by the natives, is a small plant, very numerous in places, having small blue flowers on a cone-shaped burr, stems rather trailing, no limbs, short narrow leaves on the stems. It seems to be very rich in honey by the number of bees frequenting it. The odor of the plant is somewhat like pennyroyal, hence its name. I regret I did not send some specimens, while in bloom, to Prof. Cook to ascertain its true name. There are a great many other flowers of secondary importance with whose names I am unacquainted. Those that bloom the remainder of the year I am also unacquainted with, having never observed before this year. Goldenrods are numerous, and I think bloom in August and September.

When the millions of orange and other semi-tropical fruit give their full capacity of their sweets to our bees, in addition to flowers already named, do you not think we can compare favorably with other boasted honey producing regions of the Union?

It is needless to say that articles on wintering and feeding and descriptions of chaff hives, are read by us simply to satisfy curiosity. It is exceedingly rare that our bees are not on the wing gathering stores.

Not having tin convenient, I used recently paper for separators, putting it perpendicularly around the case and prize boxes, leaving the usual space in each side of boxes. Laterally it would not hold the boxes securely.

Clifton Springs, Fla., July 22, 1879.

P. S.—My bees would not allow of the use of paper for separators, having gnawed it in pieces and carried it out of the hives. Bees are industriously gathering honey from cabbage palmetto, cow peas and many smaller flowers. The partridge pea, which is very plentiful, does not bloom till next month.

Clifton Springs, Fla., July 26, 1879.

From the Michigan Homestead.

## Style More Important than Quantity.

FRANK BENTON.

With most bee-keepers the one object seems to be to produce the largest possible amount of honey.

Important as a large crop is to bee-keepers, we believe there is another thing of





even greater importance, and that is to get their crop in such a shape that it will be of ready sale.

During the last fall and winter the writer has seen honey bought by retailers at from 10 to 12c. per lb., to be sold again at 15c. The same dealers refused honey which was equally good, when it was offered at 5c. per lb., because its appearance was such that they could not sell it at any price. Here we see two lots of honey side by side, one selling briskly while the other goes a begging. One producer gets paid for his work while the other sets up the cry of "hard times" and "over-stocked market."

The United States uses less honey than almost any country; the chief reason of this is, that it has never been given its place among other edibles.

This is not the fault of store-keepers, for they are always anxious to keep whatever they can sell at a profit. All kinds of groceries and fruits, both fresh and canned, are put up in the most tempting styles and forced upon the attention of dealers, who in turn urge them upon their customers.

In this way very much more is sold than if the trade were not directed by tact and pushed by energy and intelligence. A large part of this tact and intelligence is directed to make goods convenient for the dealers and attractive to customers. And these two things are absolutely necessary to success.

Now let us look at the honey trade and see how much it has been helped along by the intelligence and business skill and energy which have been the means of building up other trades.

The tact and taste which are employed in preparing most goods for the market, may be even the most common commodities, look attractive and in this way increase their money value. Almost every kind of goods, when they are prepared for the market have the advantage of being prepared in the style which will best present their peculiar desirable good qualities to the purchaser.

The style in which goods are put up is as important to the showing off of the goods as a frame is to a picture.

And different kinds of goods need different styles of putting up just as much as different pictures need different styles of frames.

Preparing all kinds of goods for the market is found to pay, and this in the face of sharp competition; in fact, competition compels it, for other things being equal, the thing which is the most attractive sells the quickest.

Honey raisers have treated with perfect indifference this well-established condition of trade, and with the inevitable result of being left far behind in the market. In fact, they are not even noticed by many of the people who should be their customers. This state of things is their own fault, for instead of studying the wants of the market, and making a business of supplying them, they have steadily adhered to their old methods of producing and marketing their honey.

Thus, while bee-keeping and honey raising has been standing still other lines of similar goods have advanced and taken the

place in the market and on the table which honey should occupy. There is at present much of last year's honey unsold; commission houses are offering it at low figures. But it should be noted that that which is such a drug in the market in every case, is that which is put up in the old-fashioned way; if it had been put up in tempting and attractive shape it would have sold as readily as that which did sell; for the demand is as large as the supply for honey or any other first-class article.

Bee-keepers should influence those in the business to put up their honey in marketable shape. If this could be effected honey, both comb and extracted, would take a higher rank as an article of merchandise, for the demand would be more steady and assured.

From the Fruit Recorder.

## Transferring Bees.

L. E. BEMIS.

The best and safest time to transfer bees from the box to the movable-frame hive is on a warm day when apple trees are in blossom, for at that time there is but little honey in the hive and the old bees are out in the field among the blossoms, but it may be done at any time when drones are flying. I say when drones are flying, because if we do it at a time when there are no drones, and we should happen to kill the queen, they cannot raise one which would be of any use and the swarm would soon dwindle away. It is not as bad a job as one not accustomed to handling bees would imagine.

Go to the hive from which you wish to transfer the bees and puff in a little smoke, just to drive them up among the combs; then take the hive and turn it bottom side up, and place the box of another hive on top of it; wind a cloth around the two so as to keep all the bees in and also exclude all light from the hive. When well secured, commence drumming on the sides of the hive with a stick. Drum smartly for 3 or 4 minutes, then rest a few minutes and drum again. Follow this up at intervals for 15 or 20 minutes, when usually the queen with most of the bees will be in the box on top of the hive. It is well to have a glass in one side of the box covered with a slide, so as to see when the bees go up into the box. Now take the box off the hive and set it on the stand from which the hive was taken. Leave an entrance open similar to the one in the hive, and the bees which are flying will return and enter.

Now, take the hive to some convenient place. It may be done near the stand, but if the other bees are about it is better to go into some shed or room where we will not be troubled by robbers. Have a table and spread several thicknesses of cloth on it to lay the combs on. Take off one side of the hive and cut off the cross-sticks and remove the combs one at a time and lay them on the cloth upon the table and cut them to fit as nearly as possible to the frames. They are fastened in the frame by small strips of pine, 3-16x3/8 in., and long enough to reach



across the frame, placing them each side of the comb in such position as to hold it in place, and tie the ends with strings. Thorns may be used to good advantage in some places by making a hole through the frame and putting in the thorn. Use all the pieces of worker comb that are large enough to fasten in the frames. Quite small pieces may be used and the bees will soon unite them so they will be solid. Throw away nearly all the drone comb, as many drones are useless. The drone comb is known from the worker by the size of the cells, which are larger than the worker cells, and when drone comb is capped over the caps bulge out and look uneven, while the worker brood will be nearly even. As you fill the frames, place them in the hive, keeping the brood together if the weather is cool, but if you have a good strong colony and warm weather, it will do to place an empty comb between two cards of brood, and the queen will usually soon fill it with eggs.

When you have all your combs in the new hive, set it on or near the old stand. Smoke the bees in the box, and give it a sudden jar so as to break the hold of the bees, and empty them into the top of the new hive, directly on the frames. Cover them over and they will go down among the combs and soon be about their usual business. If other bees are near, it is best to give but a small entrance for a few days; only giving room for 1 or 2 bees to pass at once, for the colony is in a poor condition to defend themselves against robbers. After a few days the strips used to hold the combs in place may be removed, as the bees will have fastened the pieces of comb together and stuck them to the frames.

Transferring may be done without drumming the bees out into a box just as well, only more bees are in the way, and there is more danger of killing the queen. Use smoke enough to keep them quiet, and as you take out a piece of comb, brush them off with a feather into the new hive, and proceed as above directed. If other bees are near, it is well to shut them into their hives while you are at work, especially if they are not gathering honey plentifully, as they sometimes will make trouble by robbing. Be careful to clean up all the honey that drops near the hive.

From the Prairie Farmer.

## Watch the Swarms.

MRS. L. HARRISON.

Eternal vigilance is the key-note of success in bee-keeping. My "partner" often says to me, "Why don't you let the bees alone? I don't see any use in your pulling the hive all to pieces, making the bees cross, getting stung, and pretty near roasting yourself this hot weather. Let 'em alone; let 'em be." I confess to a weakness for wanting my own way, and I generally manage to get it as far as the bees are concerned, if the minister who married us did have "obey" in the marriage ceremony.

I can see the use of pulling hives to pieces, if my "partner" cannot. We often hear of persons who have had such a splendid col-

ony of bees destroyed by moths. They say that "it was so strong that it swarmed three times, and then late in the summer the moths destroyed them." The poor, innocent moths were not the cause of their destruction; they only moved in because the bees could not keep house. This colony had failed to obtain a fertile queen after swarming, and as the life of worker bees during the busy season is estimated to be about 90 days, they had all died, and no more were raised to take their places.

Every colony that has cast a swarm should be examined in 21 days, and if no eggs or larvæ are found, the colony is queenless, and there is no material in the hive from which one can be raised. If there is no laying queen on hand to give such a colony, part of their frames should be exchanged for those containing eggs and larvæ with another colony, and then they will have material to raise one. In 10 days exchange the remaining frames so that the bees will have larvæ to care for, and will not desert the hive when the queen leaves on her bridal tour—and if she should be lost, have material to raise another.

It is poor economy to let a hive full of comb remain all summer with only a corporal's guard of bees; better put back all swarms but the first, after cutting out queen cells; if this cannot be done, put in some new swarms. We know of a bee-keeper who hives his after-swarms in small boxes and piles them on such a hive to mark the location, and when he has leisure, empties them before the hive, which they will enter peaceably—sometimes putting in as high as 7 after-swarms.

In swarming time, it's a good idea to save surplus queens from the best colonies, and then they will be ready for use if any vacancies occur. Before an after-swarm is returned, take out a frame containing a queen cell and put it into a hive with another frame containing hatching brood; put in a division board, and the little colony will soon have a fertile queen.

Peoria, Ill., August, 1879.

## Uniting Bees.

C. F. D.

As the great secret in bee-keeping is strong colonies, I would advise you to unite all your weak ones by putting 2 or 3 together. Uniting bees is much like introducing queens, inasmuch as no fixed rule can be given for all cases. If your bees are in frames, it is a very simple matter to lift the frames, bees and all, out of one hive and set them into another, having first removed one of the queens, where the two are situated side by side. Usually there will be no quarrelling if this is done when the weather is too cold for bees to fly, but this is not always the case. If one colony is placed close to one side of the hive, and the other to the other side, and they are small enough for a vacant comb or two between them, they will very rarely fight. After 2 or 3 days the bees will be found to have united themselves peaceably, and the brood and stores may then be placed compactly together. If there





are frames containing some honey that cannot be put in, they should be placed in an upper story or in the cover of the hive, and the bees allowed to carry it down. You should always look at them 20 or 30 minutes after they are put into one hive, to see that all is right. If you find any bees fighting give them such a smoking with cotton rags that they cannot tell "which from t'other," and after 15 or 20 minutes, if they are fighting again, give them another "dose," and repeat till they are good to each other. I have never failed in getting them peaceable after 2 or 3 smokings.

If your bees are in box hives, I should say your first job on hand is to transfer them into frames, but if you will not take the trouble to transfer them, you may unite two or more weak colonies thus: Drive the bees up into an empty box (as in transferring) from the hive containing the least combs, and shake them in front of the hive into which they are to go; then smoke them with rags to give them all one scent. Some of the bees may return to their old stand the next day, where you should have a box to catch them; then take them back to their new stand and they will mark their new location, and you will have no further trouble. Nile, Ontario.

## How to Winter Bees.

E. RODMAN.

To winter bees well and free from loss by dampness and mold, three things are needed—a steady, low temperature, fresh air and silence.

The low temperature may be secured by properly covering the hives in long rows; first with boards set up stout, meeting above the top, and the boards covered again 12 to 15 inches of earth thrown over, and during a freeze watered and frozen; then covered again with straw or corn-fodder to prevent thawing. Bees so cool and quiet remain in rest, eating very little and unaffected by outside changes.

To secure the fresh air, so indispensable, it is best to have air-holes in the top of the hives, and, after placing the hives one foot apart on a platform one foot above the ground (3x4 scantling will do), to raise each hive one inch from the bottom board by small blocks.

A hole or pit near each end of the platform, 4 ft. deep by 2½ ft. in diameter, connecting with the outside air by a 3-in. pipe, reaching through the covering of dirt and boards; the end well guarded with wire gauze against mice and other intruders, will admit colder air when needed. A stovepipe 15 inches long in the middle of the row, to reach the covering from the top of the hives to the outside air, will give thorough ventilation from below upward, carrying off all dampness.

This arrangement, with a thermometer suspended in the center pipe and examined from time to time, will give perfect control of the temperature, which should be kept at 34° Fah.

The lower pipes may be tightly closed by small boards when the outside air is too

warm or too severely cold. The upward current of air will then be supplied by the pits, and all dampness be avoided.

When weighed and marked, when covered and again when uncovered, colonies have come out well in the spring, vigorous and eager for work, with a loss of only 3 to 7 lbs. each. The cold and silence prevents injurious excitement that uncovered colonies manifest during the changeable weather of early spring, leaving the hives in the warm hours and getting too chilled to get back—a great loss of working force, after eating bountifully all winter to keep from freezing.

When the season is suitably advanced and the air is 60° ther. or more, the covering may all be removed. The bees will rouse up from their long winter's nap and take a wonderful frolic, and begin the rearing of young vigorously. If the season is backward, a supply of rye meal or middlings is useful.

From the Southern Agriculturist.

## Bee-Keeping in the South.

H. L. LONG.

With all our sources of supply, think what millions of pounds of honey are wasted without benefitting any one. Then let us be up and doing something towards this boon to some good account for man's comfort and happiness, for its medicinal and health-giving properties were acknowledged by the ancients 2,000 years ago.

Is not bee-keeping too uncertain to be undertaken as a business? I answer, no more so than any other one of the numerous industries now being successfully prosecuted. It is true that all the mysteries of the little busy bee have not been unraveled, still the progress thitherwards is as marked and encouraging as farming, merchandise, or other callings, and any one who will commence it with the same determination that would be requisite for success in other things, will surely win. To go into it extensively it would be necessary to cultivate largely those plants abounding in honey-producing flowers, and to scatter the colonies in different localities, adjacent to lands producing a great number of flowers—large swamps for instance. I imagine the orange groves of Florida would be simply splendid. Will some one who is informed on this point make it known through your journal? It would be necessary to have some simple, easily constructed, improved hive, and use both boxes and large and small frames for storing surplus honey, and to ship to large cities, as nice honey commands a far more remunerative price there than in small towns or villages. I would hesitate to state the prices that are sometimes obtained there for nice honey, lest I should not be believed. I think it highly important for any one commencing the business, whether for profit or pleasure, to have only a few colonies at first, and by getting all the information to be obtained from works on bees and frequent inspection of hives, to verify the facts learned there, so as to be able to practice them. A small observatory hive having only one frame of the same size as those



of large hives, with glass on both sides, will enable the beginner to learn very rapidly as it places everything under the eye of the apiarist, just as it exists in a regular colony so that many mysteries are explained. The busy months run from first of February to last of October, though it is chiefly confined to March, April and May.

Adaptation of Southern Georgia to bees, though there has been great success in the North, yet it can be carried to greater perfection here than there, if we will but acquaint ourselves with it here as they do there.

In this section, bees gather pollen and honey from the first of February to last of October, leaving but three months in which to be compelled to remain in winter quarters, and during these three months scarcely ten days ever pass without at least a few hours of the day in which they can take flight, which is a great desideratum to their health. Our bees remain all winter on their summer stands, the shelter that wards off the summer's sun and April showers is sufficient for winter's blasts, and we have only to make the entrance very small to exclude cold and mice and put on the honey boards, or just as well, a piece of osnaburgh laid on top of the frames of the lower story. From all accounts, we have no more moths here than in the North, besides they can be fully guarded against, as I will at some future time explain.

Now in higher latitudes, they must be put into close quarters during winter; their seasons are not more than half as long as ours, and almost all the honey producing trees that flourish there can be made to flourish here. Besides, it not unfrequently occurs, the evils incident to winter there often prove the ruin of large apiaries, while here the bee is perfectly healthy, for I have never had a colony destroyed by dysentery yet, although it frequently occurs in colder climates.

Translated from the German.

## The Frog as a Bee Enemy.

The honey bee like every living being in existence has its enemies. As is known many birds, especially swallows, snatch bees on the wing. But here another enemy of the bee might be mentioned, who as such is not generally known by many: it is the frog, the brown as well as the yellow ones. It is generally known that it chooses with predilection its abode on white or red clover, and this it does not without any motive. Thither, especially to the mellifluous white clover, the bees come in order to leave it laden with their sweet burden. But many of these industrious working bees never see their honey place again, but they become a delicious prey of the frog. With greedy, wide-open eyes, like a tiger in miniature, it stares at and lies immovably in wait of its chosen victim, until it snatches it in a favorable moment by a sure leap, when it sinks its fore part of the body deeply into the flower cup, not minding the stings its captive might apply, for the frog is "cold-blooded." No less than eleven dead bees were found in the skinny stomach of a frog—a very handsome portion! To many an apiarist the gradual diminution of his bees

in the hive the foregoing might appear clear; the frog is a dangerous foe of his pets. But hereby it is not intimated that the frog should be destroyed, because it destroys many other noxious insects. Only near the bee-hives it should not be tolerated, for there it might be apt to make itself comfortable and try its hunting skill exclusively on bees.

## The Composition of Honey.

PROF. KEDZIE.

Honey is one of the oldest things under the sun. At one time it was probably the only form of sugar known, and to-day is one of our most delicious articles of food. Does it not seem strange, then, that in this scientific age so little is known of its real composition or the changes it undergoes? Honey is composed of grape and cane sugar, together with water, acid, and waxy matters. If honey be burned completely, a grayish colored ash remains, which amounts to about fifteen per cent. of the original honey. In this ash I succeeded in obtaining reactions for silica, lime and iron. There is also a small quantity of potash and phosphoric acid in honey. To estimate the quantity of these present, I took two portions of "cap" honey, free from pollen and wax, and burned them to a coal-like mass. In one I extracted the potash with muriatic acid, and in the other, phosphoric acid with nitric acid, and estimated them in the usual manner.

The following are the amounts obtained: Potash .06 per cent.; phosphoric acid .08 per cent. These substances would naturally be present in honey, as they are found in soils, and circulate in the juices of plants. There are many things connected with honey about which, at the present time, but little is known. The following are a few:

1. Has honey a definite composition? Is there any difference between the relative amount of sugar in honey made from buckwheat, basswood, clover, golden rod, brown sugar, etc., or between the relative amounts of cane and grape sugar? Probably this question can be answered only by comparing the analysis of different kinds of honey.

2. Does the bee add anything to nectar in changing it into honey? On this point there is wide difference of opinion. But I know of no experiments having been tried to settle the matter. Perfectly pure honey, that has been dried completely, contains about one per cent. of nitrogen. Does the bee supply this nitrogenous matter? To decide this I gathered some nectar from flowers in the Agricultural College green-house (from the azalia, rhododendron, and fuchsia, but principally from the last), and carefully tested it for nitrogen. The result of my experiments is that nectar does contain traces of nitrogen. Therefore the fact that honey contains nitrogen does not prove that it was furnished by the bee. May not this question be decided by feeding bees upon pure white sugar, which contains no nitrogen, and afterward examine the honey to see if any nitrogenous matter has been added to it?

3. After honey has staid for a certain length of time, a part of the grape sugar crystallizes out, and granulation or candying





is the result. The cause of this change is not known. May not the conditions under which granulation occurs be obtained by a series of experiments, by keeping honey at different temperatures, etc.? Answers to these questions may not advance the market value of honey a particle, but we shall enjoy the satisfaction of knowing the truth of the whole matter.

From the Toronto Globe.

### A Canadian Apiary.

The flourishing village of Beeton (once Tecumseh), which is situated in South Simcoe, on the line of the Hamilton & N. W. railroad, is not so named because it contains within its limits the bee farm which will probably yield the greatest amount of honey secured this year by any one man in the world. It might appropriately have been called Beeton because it was the home of—and in fact was created by—Mr. D. A. Jones, who is one of the most skillful and successful apiarists alive; but, as a matter of fact, when postal exigencies compelled the abandonment of the old name of Tecumseh, Beeton was named after Beeton Castle in the Land o' Cakes.

Mr. Jones has 4 bee-yards, situated as it were at the east, west, north and south corners of a square or diamond, whose diameter is between 4 and 5 miles. Most of the honey is, no doubt collected within a short distance of each yard—probably within half a mile. Under pressure of necessity, however, the bees will fly a long distance for honey, 4 or 5 miles say. When flying so far it is as much as they can do to support themselves and store a surplus for winter; but as they do go these distances, it may be inferred that Mr. Jones' bees lay under contribution a territory 8 miles square, or perhaps a whole township. No doubt they do not gather all the honey nor a tenth part of it in this area, but at some periods in some years they will need to scour the whole of their domain, and even then will fail to find enough of food. The present year has been at Beeton, up to the present time, one of the best honey years in memory, and if the locality, which has been suffering a little from drouth lately, should be blessed with timely rains, the character of the year may be preserved through the fall. Should that happen Mr. Jones, who has already secured more than 50,000 lbs. of honey, will get as much as 70,000 lbs., that is, 35 tons of pure honey, every pound of it worth 15c. at wholesale. It is a striking commentary upon the progress of bee-keeping, that while 10 years ago honey brought 25 to 40c. a pound and its production was looked upon as a peddling, unremunerative kind of business; now, with much more expensive appliances, it can be produced at a splendid profit for 15c. or even less.

A modern bee-yard consists of about an acre of land, preferably sandy, and having fruit trees on it, inclosed in a tight board fence in order to keep out dogs and like intruders, who might get into trouble; a small cottage for the proprietor or his assistant; a house for wintering the bees, constructed on the principle of an ice-house, only with

better ventilatory appliances; the same house should be built so that it can be used for a summer store-room and extracting-room; the bee-hives and the bees. The latter should be Italians, or for economy's sake in starting, common black bees with an Italian queen—the Italians being more industrious and prolific, and less apt to assert the sharpness of their nether ends. The hives used by Mr. Jones are a modification, or rather enlargement, of the Langstroth hive. The aim of modern bee-keeping is to save the bees from unproductive labor, and therefore combs are made for the bees.

Mr. Jones' 4 bee-yards contain respectively 250, 150, 150 and 70 of such hives, all populated with busy colonies of workers. The number of hives is subject to constant diminution or increase, from the decay of one colony necessitating its amalgamation with another, or the increase of a colony rendering its subdivision necessary. The aim of every first-class apiarist is to have very strong colonies. The more bees the less honey is consumed in keeping up the animal heat.

The country around Beeton is peculiarly calculated for bee-keeping. It has a very rich soil, with some swamps just passing into cultivation and rich in honey plants. Basswood abounds in every piece of bush, and white clover on every roadside. In this neighborhood the first food the bees gather is from the black alder, which yields a plentiful supply of pollen and some honey almost before the snow is gone. After that the numerous species of willows yield an abundance of honey. Then the maples come in, and after them the whole tribe of fruit trees, apples, plums, cherries, etc. Before the supply is gone from this source the thorns and that troublesome weed, the sheep-burr, are yielding honey. Then comes a lull of a week or 10 days, during which the bees are sometimes hard up and have to be fed. If they are neglected now they will remain weak all the year. With the advent of the white clover there comes a rush of honey. White clover lasts 6 weeks. Strawberries, raspberries, wild grapes, and lots of things yielding honey follow. Basswood yields immense quantities of honey for 12 to 18 days, and most of the forest trees give some honey at some period of the year. After basswood that despised weed, the Canada thistle, yields "lashins" of honey; then catnip, willow-herb, golden-rod, boneset, motherwort, and many fall flowers.

Mr. Jones is now experimenting with Bokhara clover, which seems to fill the bill exactly. It is a tall-growing, leguminous plant, 6 ft. or more high, having a general resemblance to lucerne, except the blossom is whiter. It has a most agreeable perfume and blooms from July till frost comes. The bees are swarming upon it the whole time. Bokhara clover is a biennial, but as it seeds itself is practically a perennial. As a forage crop for general farm purposes it might possess many good qualities. If left to flower it becomes too woody to be of much good, but when young and tender it would yield an enormous weight to the acre. A botanist coming accidentally upon Beeton would be puzzled to find this foreigner growing here and there as a common weed



by the roadside, and he might also think some other honey plants strangely abundant.

Extracting honey from the comb commenced this year June 15th, and is expected to end about August 15th. At Mr. Jones' 4 yards there has been more than 3,000 lbs. extracted on several days of this year. At these 4 yards there will be gathered this year 70,000 or 75,000 lbs. of honey.

There might be gained to Canada, Mr. Jones asserts, a profit of \$10,000 a year in every township from the keeping of bees. He would undertake to make more money than any farmer in the world out of the same capital, and it would appear that this is no unwarrantable statement. Of course, it will not do for everybody to rush into bee-keeping with the idea that he can make a fortune every year by it. Mr. Jones' success is the result of a lifetime of close and laborious investigation, of the most patient studying of the ways of the insects, and a readiness to adopt and utilize the experience of others, which very few men possess. An essential quality for a large apiarist is that he be an excellent judge of men. Without first-class assistants, he is simply nowhere. Mr. Jones' assistants are young Canadians who intend making bee-keeping their business, and whose thorough acquaintance with their duties is a credit to them and their chief, too. While it would be the most hopeless thing in the world for anybody without experience to go into bee-keeping on a large scale, there is every inducement for embarking in the business in a smaller way. Fifty colonies of bees could be made to yield 150 to 300 lbs. of honey each, value \$1,125 to \$2,250. Colonies to the value of \$50 a year could be sold, and still the number on hand would be nearly doubled. All can be done at a very small expenditure.

In 2 or 3 years of patient study, aided by the personal superintendence of 1 or 2 colonies, the operator will be able to go into bee-keeping as a business, and he or she, for there is no business so especially adapted for women as bee-keeping, will possess a certain means of livelihood of which nothing can dispossess him. His income will fluctuate with the seasons, but no more so than the income of every farmer. If he is not above peddling round his honey, he can get a much higher price for it than if he sends it to a commission merchant, and moreover his customers will then be sure of getting it unadulterated, and will become regular customers of stated quantities.

If a man conducts his business so badly as to lose all his bees by dysentery in the winter, it is of no use his continuing a bee-keeper. One of Mr. Jones' winter houses is a model. It is equipped with the underground pipe for ventilating and carrying off carbonic acid gas which is now being applied to dairy ventilation. By means of this pipe, which opens out about 300 ft. away from the house, the air is delivered pure and at a uniform temperature of about 50° winter and summer. The hives are stored in this house, care having been first taken to see that the colonies are strong, and that they have enough of honey to last them till spring. The moisture generated by the bees passes off readily, and the consequence is the colonies come out strong in the spring.

## Conventions.

### Sanilac County, Michigan.

Sanilac County Bee-Keepers' Convention was held at Carsonville, June 20, 1879; quite a number of the most prominent bee-keepers of Sanilac put in an appearance. President George Smith, of Amadore, opened the convention with an able address on "The Honey Bee and Its Habits."

The question of wintering was discussed without arriving at any definite conclusion. James Mattison and others advocating more upward ventilation, while Mr. Wm. Sweet wintered best in double-walled hives, with upward ventilation entirely cut off by leaving honey board on and covering with six thicknesses of paper, then eight inches of sawdust on top of the paper.

How to build up our depleted apiaries was then discussed. Comb foundation and judicious feeding, during a scarcity of nectar, was the conclusion.

A report was given of the apiaries of the eastern part of Sanilac; 1,400 colonies were put up for winter in various ways, 150 responded to the roll-call in the spring, and the western part of the county suffered even more severely. JAMES ANDERSON, Sec.

Farmers, July 9, 1879.

### Western Illinois and Eastern Iowa.

Proceedings of the 5th semi-annual meeting of the Western Illinois and Eastern Iowa Bee-Keepers' Society, held at Hamilton, Ill., May 6th and 7th, 1879:

Called to order at 10 a. m., May 6th, President Scudder in the chair. The attendance was large and composed of some of the most enthusiastic practical bee-keepers of the West. A committee was appointed to arrange subjects for discussion in proper form. The minutes of last meeting were approved as published in the AMERICAN BEE JOURNAL. Thirty new members were added to the roll as follows, 11 ladies and 19 gentlemen, making our present membership 125:

James Sangier, Hamilton, Ill.;  
 Mrs. C. M. Kingsly, Elvaston, Ill.;  
 Thomas Ruggles, Hamilton, Ill.;  
 J. Renand, Keokuk, Iowa;  
 J. W. Barlow, Keokuk, Iowa;  
 W. J. Ash, Eldersville, Ill.;  
 Wm. S. Butler, Blandinsville, Ill.;  
 D. W. McDaniel, Hamilton, Ill.;  
 Dr. T. J. Dodge, Hamilton, Ill.;  
 Mrs. E. C. Hammond, Warsaw, Ill.;  
 S. N. Black, Clayton, Ill.;  
 Mrs. Z. Hollingsworth, Mount Rose, Iowa;  
 Mrs. A. B. Ruggles, Hamilton, Ill.;  
 C. N. Dennis, Hamilton, Ill.;  
 Miss Kate Ruggles, Hamilton, Ill.;  
 Mrs. C. P. Dadant, Hamilton, Ill.;  
 W. H. Githens, Hamilton, Ill.;  
 E. J. Baxter, Nauvoo, Ill.;  
 Mrs. E. J. Baxter, Nauvoo, Ill.;  
 Mrs. C. N. Dennis, Hamilton, Ill.;  
 Mrs. Dr. Githens, Hamilton, Ill.;  
 D. C. Milliken, Elvaston, Ill.;  
 Mrs. D. C. Milliken, Elvaston, Ill.;  
 Mrs. Mary M. Clute, Iowa City, Iowa;  
 M. T. Chenoweth, Warsaw, Ill.;  
 J. H. Boyce, Hamilton, Ill.;  
 C. R. McClaughry, Hamilton, Ill.;  
 J. S. Johnson, Eldersville, Ill.;  
 Thomas S. Wallace, Clayton, Ill.;  
 Dr. A. X. Illinski, East St. Louis, Ill.





### Discussions.

The discussions during the sessions were able and lengthy, but on account of taking up too much valuable space in the JOURNAL must be abridged very much.

### Wintering—Methods and Reasons of Failures.

D. D. Palmer. Wintering is not a hobby with me, I have so many it is not of so much interest if I lose a few. I advise putting bees into winter quarters early. I put in a part of mine early—cellar well ventilated, double doors, open at will. I think a pipe should be run out 100 or 200 ft. from cave or cellar; let air in at further end and by the time it gets to the bees is tempered to their condition. The balance of my bees were put in Jan 10, 1879. Lost 2 of the 130 first put in and 75 out of the last 150 in, which showed signs of dysentery.

C. P. Dadant. We use 60 or 70 American hives, 300 or 400 Quinby hives and some Langstroth hives. Lost 10 per cent. in the Langstroth hives, 1 or 2 colonies in the American, very few in the Quinby. The trouble with the Langstroth hive is, it is too shallow, the bees starve because the honey gives out above them, and bees can't reach it sidewise on account of the cold. Bees have died more from neglect than any other way. I think the Langstroth hive is especially adapted to cellar wintering.

Wm. M. Kellogg. We winter our bees in a sand cave, double doors, 10 in. of sawdust overhead, cave well ventilated by 6 tubes through the sawdust and 1 out at the sides at the east. We winter with almost no loss, if bees are put in early and in good condition.

O. Clute. As to Mr. Palmer's suggestion of a long pipe, why can't we use ice? I think most bee-keepers could use ice to good effect.

L. H. Scudder. My bees got very hot, the walls were covered with bees. Kept closed till dark, then opened the doors. It was so hot the air looked like steam. Left the doors open till morning; it was quite cold; a large amount of bees were clustered in one corner. Had to open the doors every night. I want under ventilation.

Wm. M. Kellogg. We used ice in our sand cave, and it worked well; don't know how it would inside on the soil. I want a great deal of under ventilation. Our bees seemed to suffer more from impure air than from warm air.

O. Clute. The objection to dampness from the use of ice can be overcome by placing ice in each upper corner and catch the drip in pipes. Am confident if we go to work in the right way we can overcome all difficulties and keep down the temperature by the use of ice.

Chas. Dadant. Ice will draw the moisture to itself instead of giving it off.

Mr. Dadant spoke of deep frames for wintering. How much honey do you recommend over the bees for out-door wintering?

C. P. Dadant. I can't say as to pounds; ought to be 6 inches of honey in the Quinby frame, 5 or 6 in the American; 2 or 3 inches is too little. In the cellar it makes no difference, so there is plenty of honey. If we didn't care for the cost of help in handling, we would prefer to use chaff hives.

D. D. Palmer. I was at James Heddon's apiary; he is one of our foremost bee-keepers; has near all the hobbies, hives of all shapes, and thinks a winter repository much the cheapest.

O. Clute. Chaff tends to keep the hives warm and prevents spring dwindling, also keeps the heat out in the summer.

### AFTERNOON SESSION.

The following address of welcome was delivered by Mr. C. N. Dennis, Mayor of Hamilton:

"In the name and on behalf of my fellow citizens, I have the pleasure of offering you a cordial welcome to Hamilton. We thank you for the honor conferred in having selected our city as the place of holding this your 5th semi-annual meeting, and I trust and hope you may receive at our hands the courtesy and hospitality you deserve. Gentleman, your labors in the science of bee-culture tend to promote the growth and to develop the resources of the States, which you in part represent, as well as to conduce to the well-being of mankind. It has been said that vegetable production constitutes the beauties of the earth, but it must be admitted that your productions add sweetness to the beauty. I also hope that the fraternal relations may be such that you will return again and again to do missionary work among us, and that we may be allowed to sit humbly at your feet and gather the sweetness of instruction as it falls from your lips in your discussions. 'Full many a flower,' etc., and the person male or female, who assists to gather and utilize the same is a public benefactor and I should fail to do my duty did I not mention our bee-keepers, Dadant & Son, as pre-eminently filling that position. We desire to call your attention to the 'Father of Waters' as it flows at our feet with an undeveloped water power of almost unlimited extent; to our bluffs, rough but picturesque, and healthy, offering perfect havens for the apiary and home, all backed by a promise of unexcelled fertility, a community intelligent and law-abiding. The whole forming a location inviting your attention as a home, but whether as a visitor or a settler, we bid you welcome, thrice welcome."

### Spring Dwindling.

Mr. Whitlock. Have handled bees for the last 20 or 30 years. In March some colonies are strong, many bees fly out and never return. I think the queen becomes affected with the disease; brood is deficient. Bees passing out and no bees being raised, is one cause of spring dwindling. There are not bees enough to hatch and take care of what eggs the queen does lay. Remedy: Take out a part of combs, put in division board and give no more room than needed; cover well to keep air warm. Combs to be spread later.

D. D. Palmer. We did not hear so much of this till the Italians were brought in; don't hear of the blacks having it so much. Italians fly in colder weather than blacks, and work when the blacks are still. Keep bees in the cellar as late as possible.

Mr. Whitlock. I found this year that my blacks were the first to "fly out."



Mrs. Z. Hollingsworth. I keep my bees in by shading the front of the hives; it is a good preventive.

L. H. Scudder. I would suggest placing the entrances to the north and shading well would be a great help. The first spring dwindling I ever had was before I ever saw an Italian. I think the queen gets the disease as well as the bees and stops her laying.

#### What Will Pay to Plant or Sow?

D. Rider. Have not paid much attention to this, but think to fill up vacancies in early spring it would be well to plant trees and shrubs, currant, raspberry, gooseberry, etc. Think all who keep bees should have a good supply of these, as also of cherry, plum, pear, etc. The fruit is very nice with honey. White clover comes in next; mignonette is very good. Previous to flowers I would feed liberally to stimulate brood rearing.

#### To Keep Bees from Swarming.

E. D. Godfrey. I go through my colonies once a week if I can, extract some and keep them at work. Extract from outside combs and put them in the center. I have no white clover; get the larger part of my surplus in the fall. Expect to feed my bees in June. We have very little fruit.

C. P. Dadant. Have young queens; if we have old ones the bees want to supersede them and raise queen cells. We use large hives; allow no drone comb in the brood chamber; drones make a great deal of noise around the bees and make them restless, which is one cause of swarming.

D. D. Palmer. Deprive the colonies of all drone comb; put the boxes on early; give plenty of room; don't take off the sections all at once, but changing empty ones for full ones. To get bees started to work in boxes give them a section already started by some other colony with the bees in it. Shade thoroughly.

#### Where and How Dispose of Our Honey?

C. P. Dadant. I think the best place is as near home as possible. Hunt around home; people don't know our honey is cheap; are surprised at its cheapness when told. We are in favor of extracted honey; we get about one-fourth comb honey, the rest extracted. We sell as much as possible in bulk.

Thos. G. Newman. The question is a very important one. Mr. Dadant is correct; sell near home as much as possible. We are letting our bees gather a great deal of honey, but we have not created honey consumers; not a tithe is used that ought to be. The Good Book says, "Eat of the honey as it is good." Our neighbors don't know that we sell our honey so cheap; we ship it away off. Give them tastes of it; get them to using it. Have both comb and extracted; people have a fancy for comb honey, educate them that extracted is the best, then you have done a great deal as to the *how*. I don't want to eat wax, I want extracted honey for my stomach, and candied honey at that. I think the Dadants' way of putting up honey for the market in tin cans, is the very best way. That is one answer to "How to sell our honey?" We must fos-

ter all ways of bringing honey into commercial use as much as possible.

O. Clute. I think we should produce both comb and extracted, and cater to which is most demanded. Let us make them produce pure honey whatever we do.

D. D. Palmer. Canada is full of glucose; 300 to 400 grocers sell it; not more than 2 or 3 have pure honey.

#### Do Bees Injure Blossoms?

D. D. Palmer. What do bees do about these blossoms? They go from one flower to another, leaving each flower just as they found it, and never injure it.

#### Recess.

A recess was taken for the purpose of examining and explaining the articles on exhibition, among which were the following: Picture of Rev. L. L. Langstroth; Quinby smoker from L. C. Root; Bingham's smoker, 3 sizes; C. W. Dunn's Quincey smoker; Dadant's specimen of honey pails, 2 kinds of honey wine, honey vinegar, bottle of queens in alcohol, ancient bee books, observation hives showing queens, samples of honey of 1873, improved Quinby hive, double-walled paper hive; Bingham, Novice and Muth honey knives; Novice, Muth and Everett (2) honey extractors; Barnes' foot-power saws, 2 styles; Shuck's Universal bee-hive, described by T. G. Newman; Lewis & Parks, Watertown, Wis., section box; swarm catcher, made of a cloth sack, wire hoop and a handle (Dadant's).

D. D. Palmer gave a short article of instruction in regard to raising the raspberry.

Adjourned to 7:30 p. m., at which hour the meeting was called to order and listened to an able lecture on "Honey and Money" by Rev. O. Clute, of Iowa City, Iowa. The large hall was crowded and many were obliged to stand up. The Hamilton Brass Band played a number of excellent pieces before and after the lecture. After the lecture was over the floor was cleared and those who wished, to the number of some 50 or 60, passed two or three hours in a pleasant, social dance.

#### WEDNESDAY MORNING.

The Committee on Adulteration handed in their report, which is as follows:

#### Report on Adulteration.

About 10 years ago in August, I had sold to a honey dealer in Chicago several barrels of extracted honey. The price then was high—17c. per lb. Soon after I was informed that the same firm retailed clover honey in small bottles and in tumblers, for about the price or even less than it had paid me at wholesale. Of course, I became convinced that my pure honey had been used to give the taste of honey to some cheap article, and that the mixture was sold as pure clover honey. But it did not occur to my mind that so poor an article as glucose could be used, and I imagined that a strong solution of white sugar had been used, the comparative low price of sugar giving a fair margin to the adulterators.

The readers of the AMERICAN BEE JOURNAL can remember that I then wrote an article on adulteration, showing that un-





principled dealers were able to undersell the bee-keepers. My figures were based on a mixture of honey and sugar syrup, and on this the profit was handsome, but no doubt those dishonest dealers sneered at me, for their profit by using glucose was at least four times greater. No wonder that some of those dealers, poor a few years before and nearly unable to pay for the honey bought, became suddenly rich while we bee-keepers had to work hard to produce and sell pure honey.

Persuaded, as I then was, that sugar was used to adulterate honey, I thought that this base competition would cease as soon as the increased production of honey would compel us to sell our crop cheaper, and I anticipated that the day was not far distant when the sale of this injurious article would be no longer profitable; the main damage to the bee-keeping community being, in my mind, the prolongation among the consumers of the false idea that candied or granulated honey was a spurious article, while liquid honey was pure. The adulterators, being unable to manufacture a mixture that would candy or granulate, took the greatest care to warn the retail dealers, and these in turn to warn their customers, against candied honey. This prejudice is alive yet in the minds of most of the consumers, and is the most tedious cause of the difficulties we meet in the sales of our pure extracted honey.

This rapid enriching of the adulterators was too apparent not to tempt some of the dealers, who make a living by adulterating everything in which adulterations can be made profitable. Many of these dealers, eager to be rich, took up the nefarious business, and soon the whole continent of North America was found too narrow for their operations; they reached their dishonest hands across the sea to sell their fraudulent products in the markets of the Old World. But most of the countries of Europe have strict laws against the sale of adulterated articles. Not long since a grocer of Glasgow, Scotland, was fined for having sold spurious honey from America, adulterated with 57 per cent. of glucose. I wrote immediately to Glasgow, and was answered that two American dealers, Thurber & Co., of New York, and Bradshaw & Wait, of Chicago, had sold adulterated honey.

A few months after, while in St. Louis, I bought a bottle of extracted honey labeled "John Long." This name means Thurber & Co. This honey, which I bought in St. Louis, was adulterated with glucose, like that which was confiscated in Glasgow. While in St. Louis I found liquid adulterated honey in nearly every grocery. I there became convinced that our business was doomed, unless some steps were taken to stop this dishonest competition.

Most of the members of the convention know what followed. At our meeting last year, at Burlington, I proposed to have a committee appointed to frame a petition to Congress against the adulteration of sweets. My proposal was unanimously accepted, and I was appointed the chairman. A petition was prepared and printed, and several thousand copies of it were distributed. Then having been informed that the Com-

mittee of Ways and Means in the House of Representatives was making inquiries as to frauds committed on sugars by some refiners of New York, to cheat the custom house and the consumers, I corresponded with several honest sugar refiners who had denounced the fraud, and we aimed to help each other in obtaining from Congress a law against adulteration of sweets in every form. The petition, filled with names from every State, was put in the hands of energetic representatives of several States, but a vote of Congress referred it to the Committee of Ways and Means, and it is among its other papers waiting for a report, which perhaps may never come.

Another attempt was made by presenting a bill against adulteration of articles of food and medicine, but Congress was too much occupied with partisan discussions to look at the bill, which was also referred to the same committee and buried.

Such was the result. No, I am mistaken for something of real importance has been obtained. The legislatures of Michigan, Minnesota, Kentucky and New Jersey have passed laws against the adulteration of honey. Of course these disseminated efforts will greatly benefit our business, but they are insufficient to stop altogether the adulteration, and we propose to you to help us in persisting in our attempt to obtain a general law against adulteration. A law from Congress alone can entirely stop adulterations, for a dealer in New York, after selling adulterated honey in the West, will almost never be prosecuted; while an honest retailer here may be fined for having sold, without knowledge, a spurious article.

What we want is a law similar to that of England or France, with the appointment of officers to enforce it and prosecute the fraud everywhere. By the encouragement that we have received from every part of the country and by the number of signatures that were obtained in every place to which the petition to Congress was presented we are confident that such a law is desired by all, and that it will be enacted sooner or later. But to reach such a result we need renewed efforts to keep this idea in the minds of the people.

A great number of papers supported us by publishing the petition in their columns, but we regret to say that we have found one opponent to our move in the editor of a bee-periodical which we had considered as a friend to our cause. We will not here renew the criticism that we have written on his course, for it seems that he now acknowledges that he was following a wrong track. We, therefore, hope to see him seconding us in our new efforts to obtain the law desired. The editor of a new-born bee-paper, called the *Bee-Keepers' Exchange*, published especially to help the sale of bee-fixtures (we have already too many of such papers) seems to care very little for the welfare of bee-culture, for instead of censuring Thurber & Co. for having killed the exportation of extracted American honey to Europe by sending adulterated honey, he extols them for their endeavor to export comb honey to England. The motive of such flattery is evident; the editor hopes to have his share of the money paid by the firm for



advertising. Never will such a course be approved by sensible bee-keepers, who will turn the cold shoulder to this editor.

To sum up our report, we desire that a new committee be appointed to follow the move already in progress, to extend it to every kind of adulteration in food and medicine, till the object in view be reached. All of which is respectfully submitted.

CHARLES DADANT, *Chairman*.  
Hamilton, Ill., May 7, 1879.

The report was received and the committee continued. Chas. Dadant & Son refused to receive any pay for their services.

#### Drawing of Prizes.

Quite a number of valuable prizes were given away to the members present, consisting of full colony of bees with imported queen, tested queens, comb foundation, cash, plants, eggs, books, etc.

#### Best Method of Raising Italian Queens.

C. P. Dadant. Our plan is, in the spring divide a strong colony of bees, take the queen away with the smaller quantity of old bees, put in a new hive on the old stand with a part of the combs. Make 2-comb nuclei. In 9 or 10 days introduce queen cells to these nuclei. Raise queen cells in strong colonies; we think queens raised in small colonies of less value. The first queens hatched are undoubtedly the best. Put drone comb in strong pure colonies early and stimulate to cause the queen to lay.

Chas. Whitlock. I buy black bees in the spring if I can; take the bees all out, kill the queen, take some combs out of pure Italian colonies and put in with the black bees; they will go to work and raise queen cells. In 10 days look the combs over; will find queen cells. I make my nuclei 2 days before I look for cells. Select good long cells; rough ones the best. The number of cells varies according to the season.

D. D. Palmer. It is easy to get an almost unlimited number of queen cells; cut off 1 or 2 inches from the bottom of the comb, and you will get plenty of cells.

E. D. Godfrey. I use new comb, strong colonies, take the queen away, cut combs to leave in strips, get a large amount of cells. Feed all the honey they will eat; cells will be large and good.

L. H. Scudder. Have any discovered any difference in queens raised from eggs or larvae?

N. Grigsby. I have queens hatched in 10 days, also 16 days; the oldest queens are always the best with me.

E. D. Godfrey. You must feed colonies when raising queen cells, unless honey is coming in in great plenty, or you will not get good cells.

Chas. Whitlock. I have a similar experience to Mr. Grigsby.

#### AFTERNOON SESSION.

##### Why Do Bees Swarm Out in Spring?

C. P. Dadant. I don't think any one ever saw full strong colonies leave, always the light ones; sometimes caused by lack of pollen. We have kept them at home by giving combs of pollen. Another cause is dampness in the hive; also bad honey.

There are numerous causes. It comes of tetter after a hard winter. I think they always have a queen at such a time. When they leave in the fall I think it is caused by weakness and probably too much honey, which is colder than partly empty combs.

D. D. Palmer. There is very little of this among the practical bee-keepers; it is among the beginners mostly.

Chas. Whitlock. I agree with Mr. Dadant as to cause and size of swarms. Robbers get to work and the swarm goes with them.

The ladies of Hamilton and vicinity exerted themselves so energetically in the provision line, that a large basket picnic dinner was served both days in the Masonic Hall kitchen, so that members present need not go home for dinner. Over 60 the first day and more than 90 the second day sat down to the bountifully filled tables and did ample justice to the feast of good things set before them. Resolutions of thanks were passed to the ladies for their labors and dinners, the mayor and council for the use of their hall, the citizens of Hamilton and vicinity for providing homes for visitors, the band for their excellent music, the local bee-keepers who labored to make the meeting so complete a success, the local and other newspapers for their kind notices of the call, and the orators who came from a distance to talk to us.

The Society presented the Secretary with a bound volume of Cook's "Manual of the Apiary." Messrs. Paul Lange and George Bischoff were appointed a Committee of Arrangements for the next meeting.

Adjourned to meet at Burlington, Iowa. Time of meeting being left to the Executive Committee.

L. H. SCUDDER, *Pres.*

WILL M. KELLOGG, *Sec.*

#### Lancaster County, Pa.

The quarterly meeting of the Lancaster County Bee-Keepers' Society was held Monday, Aug. 11th, 1879. The Secretary being absent, J. M. Johnston was chosen Secretary *pro tem*.

##### Importance of the Honey Crop.

On taking the chair, President Reist made a brief statement, showing the importance of the honey interest in the United States. He said that careful statisticians placed the annual value of the honey crop at \$8,800,000 and the annual value of the wax at \$6,000,000, making a total of \$14,800,000. The money value of the honey exported amounts annually to \$1,200,000 and the export of wax amounts to 701,000 lbs. At the late English Honey Show the United States were credited with showing the best product. It was estimated that there were 35,000 bee-keepers in the United States and that the product was 35,000,000 lbs. of honey—an average of 1,000 lbs. each.

##### Report of the Local Honey Crop.

President Reist added that his own bees had increased about 75 per cent. during the past season—all by natural swarms. One of his colonies that had no queen had been robbed; another was attacked, but was





saved from its enemies. The honey harvest will be small, owing to the drouth which destroyed the bee pasture. The bees are in middling good condition for wintering.

J. F. Hershey, Mount Joy, reported that his bees had done very well during the spring; he had taken out 650 lbs. of honey. Since June they had done but little, the drouth having destroyed the pasture. He does not expect them to do much more this season. The colonies are in good condition for wintering.

D. H. Lintner, Millersville, said his bees did very well in April, May and June; he started in the spring with 14 colonies and bought 12 more; he placed them in small 8-frame boxes. In June he commenced transferring and dividing them; those transferred were placed in 12-frame hives, except the swarms which he placed in small hives, increasing the number to 43; they are now all in good condition, filled with honey and bees. He took 250 lbs. of honey from them; his bees paid him 250 per cent. on their cost; he sold his honey at 20 to 25c. per lb. Since July 1st the bees have not been doing much, there being no clover or other bee pasture from which they can increase their store.

I. G. Martin, Earl, said he had 20 colonies with which he started in the spring. He tried to prevent swarming, but he got 4 natural swarms, and since then some artificial ones. He has now 30 colonies; he took 540 lbs. of honey; since harvest the season has been poor, and the bees gather no more than they want themselves; the honey crop for the season is almost over.

Eli Hershey, Paradise, has 35 per cent. increase; got 9 swarms out of his 25 colonies; 25 lbs. of honey per colony is all he could report.

L. S. Fleckenstein, Manor, started in the spring with 12 colonies; can depend on only  $\frac{1}{2}$  of these for honey; tried to prevent natural swarming; had one natural and no artificial swarms. He wants to get more honey and less bees; the honey can be sold at any time, but the bees can't. He took 18 or 20 lbs. of honey from each colony; the season is not over yet. He lives near the river, and his bees fly over to the York county buckwheat patches and return laden with honey; some of them are lost in crossing the stream.

John Eitemiller, Strasburg township, started in the spring with 18 colonies and now has 27; got 300 lbs. of comb honey; he took no extracted. His bees are all in good wintering condition.

#### Best Method of Preventing Swarming.

J. F. Hershey read the following essay:

"As this question was referred to P. S. Reist and he referred it to me, I will say a few words on the subject of preventing bees from swarming. I find that there are four points that must be made use of, and those are shade, air, putting empty combs between brood, and getting the bees to work in honey boxes. To prevent swarming, commence as soon as the nights are getting warm to keep the hives well shaded; but have them so arranged that the air can pass over and around the hive. If a hive is ever so well shaded and stands in a warm place where the air cannot pass over and around

it, shade will not help to prevent swarming. Shade and air must both be made use of at the same time. If shade is made with a roof, keep it 1 or 2 feet above the hives; don't merely shade them by having the roof right on top of the hives as then the rays of the sun will come too close to the hives.

"When the center combs are well filled with capped brood and the nights are warm, take an outside comb and if the comb is full of honey uncap it; then put it between two combs that are filled with brood. In this way, every 8 days put a comb between brood. If 3 combs are put between brood it is enough, and no more than 1 comb between brood at a time; if more is at one time the brood nest is spread too fast for the bees.

"To get bees to work in the honey boxes, give each colony 2, 3 or 4 sections filled with comb and another section that is empty. As soon as the bees gather honey, they will fill the combs in the section, and at the same time will commence to build comb in the adjoining empty section. As soon as the sections are full take them off and put empty ones in their place. If the sections are left on till they are all full the bees will not have enough room to build combs, and will commence to build queen cells, and the brood chamber being filled with honey, the queen will have no room to lay."

I. G. Martin agreed with the essayist in all particulars.

D. H. Lintner agreed with the essayist; when he did not want his bees to swarm he destroyed the queen cells and changed the combs around a good deal in the hives.

Mr. Fleckenstein's plan was to take out the full combs and insert empty ones in the hives.

J. F. Hershey said that since following the plan marked out in his essay he had not in 8 years more than 5 natural swarms.

Mr. Martin's experience was different; he had had natural swarms when the hive was not more than half full of bees and the combs not more than half full of honey.

President Reist asked what was to be done when the frames could not be removed from the hives, and Mr. Hershey answered then nothing could be done except to give the bees as much shade as possible and otherwise make them comfortable.

#### Should Glucose Be Fed to Bees?

I. G. Martin, to whom the question had been referred, said he did not know anything about it; had never used it, but his friend Thomas Thurlow had done so. The bees fed on it freely and seemed to thrive; but he believes Mr. Thurlow had discontinued its use. It is generally thought to do no good.

J. F. Hershey was glad to hear that no one present had used glucose; it was generally condemned by those who had tried it, and also by the papers in the bee-keeping interest.

#### A Colony of Bees.

J. F. Hershey exhibited a small colony of bees at work. They were inclosed in a glass case a foot or more in length and height and about 3 inches in width. In the middle of the case was placed a piece of comb foundation, secured to its place by fine wires



stretched from one side of the case to the other. On the foundation the bees had built brood cells, the queen had laid eggs in them, and a great many of the cells were capped. By an arrangement at the bottom of the case feed could be introduced.

#### A Vase of Honey.

D. H. Lintner showed a glass vase nearly a foot in height and 6 or 8 inches in diameter, the inside of which the bees had completely filled with honey. The vase presented a novel and very pretty appearance. Mr. Lintner said that he placed a small piece of comb foundation on the inner surface at the top of the vase. He placed the vase on a wooden bottom, with an opening in it for the bees to enter or leave at their pleasure; he introduced the bees, covered the vase with a wooden box, and let the bees do the rest of the work. They commenced building comb on the foundation he had furnished, commencing at the top and building a comb of the usual thickness from the top to the bottom, conforming the two ends of it with mathematical precision to the shape of the vase, barely leaving room for themselves to pass from one side of the comb to the other. The center comb being finished and filled with honey, the industrious little architects went to work and built additional combs on each side of the center one, the inner surface of these being parallel with the surface of the center one, and the outer surfaces being nicely conformed to the shape of the vase. These too were filled with honey and capped. The vase was quite a curiosity and much admired.

#### Honey for Shipment.

I. G. Martin exhibited a jar of pure extracted honey, and also a shipping crate containing 12 2-lb. boxes of comb honey which was very fine. Mr. Martin explained his plan of putting the bees to work. Each of his hives contain 21 2-lb. frames, in each of which he placed a small piece of comb foundation. As fast as the frames are filled with honey, he removes them, replacing with empty ones.

J. F. Hershey also exhibited a somewhat similar shipping crate, containing 25 1-lb. boxes. He said he could sell 1-lb. boxes more readily than larger ones. His boxes are 5x3 $\frac{3}{4}$  inches, outside measure. Unless he has natural comb, he places a little comb foundation in each box before he sets the bees to work.

#### How Bees Are Shipped.

Mr. Hershey also showed 2 dozen cages, each containing an Italian queen and 6 or 8 workers. The cages are simply wooden blocks, with holes bored in them  $1\frac{1}{4}$  inches in diameter, the top being covered with a wire screen. In this way they are easily shipped by express.

#### Are Bees Injurious to Crops?

The following essay was read by D. H. Lintner:

"Some people will contend that bees are injurious to crops. Now, instead of bees being injurious to crops, I shall prove to you that they are an advantage. First, the stamen and pistils of flowers answer the

different organs of the sexes—that is, male and female. The stamen is the male, which furnishes the pollen; the pistil is the female, which must be impregnated by this dust or pollen from the stamen, or no fruit will be produced. Now, as we all know that the breeding in and in of animals is detrimental, so it is in the vegetable kingdom. The pollen from one flower always falling on the pistil of its own flower would deteriorate. Thus it becomes necessary that the pollen produced by the stamen of one flower shall fertilize the pistil of another to prevent barrenness. This is fully accomplished by the bees traveling from flower to flower and carrying the pollen sticking to their legs and wings, to the next flower, and impregnating the pistil of it. If all the bees were to be destroyed, I for one, if a farmer, would prefer to go into some other business. This prejudice against bees seems to me to have no foundation, and I hope that the day is dawning when it will be done away with."

Mr. Fleckenstein indorsed the essay, and in confirmation of the opinion that bees will not eat whole grapes, he stated that in some way a number of bunches of grapes on his vines had become broken, and hundreds of bees were soon swarming around them. He removed all the broken grapes, leaving the sound ones on the vines. In 15 minutes every bee had left.

On motion, the society adjourned to meet on the second Monday of November.

### Texas Bee-Keepers' Association.

The Texas Bee-Keepers' Association held their first annual convention in Greenville, Hunt Co., Texas, July 13, 1879.

The Convention was called to order by the President. The President's address was short but interesting. He was well pleased with the progress of the Association, and the increased interest manifested in bee-culture since the organization of the society. He impressed the Association with courage to carry on the good work begun. Twelve months ago the first convention was called together, through the efforts of three or four working bee-men in Hunt county and the President himself. The meeting was a success beyond their utmost expectations, and resulted in the organization of the Texas Bee-Keepers' Association at this place. Since that time it has increased in interest, and many live and active members have been added to its ranks. He called attention to our representation in the National Convention, to be held in Chicago next October, on which he spoke with much interest. He viewed the present year as a failure in the honey yield, caused by the extreme drouth, which so depopulated the colonies that we could not expect more than to save our bees through the winter; and even this should not discourage us, as every year was not like this, nor was any pursuit a success every year. Agriculture and horticulture, like apiculture, have their seasons of short crops, as well as their seasons of abundance.

After the President closed, the officers for the ensuing year were elected as follows:





W. H. Andrews, President, McKinney, Collins Co.; F. F. Collins, Vice President, Dallas, Dallas Co.; John Mason, Treasurer, Greenville, Hunt Co.; Wm. R. Howard, Secretary, White Rock, Hunt Co.

A resolution was offered by W. R. Graham for the appointment of a delegate to represent us in the National Bee-Keepers' Convention, to be held in Chicago, Ill., Oct. 21, 1879. After some discussion W. H. Andrews and F. F. Collins were chosen as delegates to the National Convention.

The subject of awarding prizes for improvements in implements, hives, honey knives, smokers, honey in the best marketable shape, etc., was suggested by F. F. Collins, which after much discussion was laid over as unfinished business.

The following subjects were chosen for discussion at the next meeting of the Association, and members appointed to write discourses upon the same: "Foul Brood," F. F. Collins; "Test of Purity and Breeding Italian Queens," W. H. Andrews; "History and Anatomy of the Queen Bee, and Native Honey Plants in Northern Texas," Wm. R. Howard; "Bee-Keeping as a pursuit," W. R. Graham; "Does Bee-Culture Pay?" John Mason; "Can Bee-Keeping Be Overdone?" L. J. Green; "Can We Overstock Our Apiaries?" J. H. Cooke.

Foul brood was discussed by Mr. Collins, of Dallas, the only member present having the disease in his yard.

The Convention adjourned to meet in Dallas, Dallas Co., in October, during the Fair at that place. Time to be set by the Executive Committee.

W. H. ANDREWS, *Pres.*

WM. R. HOWARD, *Sec.*

### Dainty Bees.

In the *Popular Science Monthly* a correspondent, Thomas D. Lilly, of Virginia, gives an account of his observation the past summer of the visits of bees and other insects to the flowers of petunias and morning glories. His account of the operations of the insects is interesting. He says: "During the summer I spent much of my time in a porch surrounded by petunias and morning glories, of all shades of color from white to bright purple and dark violet. I first observed that the colored petunias were torn to pieces every day before noon, while the white or pale ones escaped almost uninjured. I soon discovered that the bees and butterflies were the mischief-makers, and that the damage was done with their sharp claws in struggling to get to the bottom of the flower-cup. I kept a close watch, and my first impressions were fully confirmed. In every variety of situation and circumstance the white petunias have been neglected for the colored, in exact proportion to the intensity and vividness of color; and the same I found to be true in a less degree as regards the deep and pale morning glories. I have called the attention of others to the facts, and proved the preference of the insects is by color alone. If there was any difference whatever in the sweetness or fragrance, it was in favor of the rejected white flowers.

## Our Letter Box.

Coopersburg, Pa., July 30, 1879.

At this date our best honey crop is over—having experienced one of the best honey seasons we have had for years. We have to depend mainly on white clover, which was very abundant in our locality this season.  
PRESTON J. KLINE.

Hopedale, Mass., Aug. 4, 1879.

Where goldenrod, boneset, milkweed, elder, sumac and sweet pepper bushes grow only by the road or brookside, near fences and in the edge of the woods—nowhere in large patches—are they to be depended on as of much value for the production of honey? Would the Rocky Mountain bee-plant probably flourish and yield honey if cultivated in Southern Massachusetts, and where can the seed be obtained? Can any one give me an approximate idea of how much land should be sown with honey plants, such as borage, mignonette and sweet clover, to furnish pasturage for 3 or 4 colonies of bees?  
M. A. S.

[When the plants you speak of grow plentifully by the roadside, etc., in small patches, they should furnish sufficient pasturage for 3 or 4 and even more colonies of bees. We should suppose the Rocky Mountain bee-plant could be cultivated in Southern Massachusetts very advantageously, as its cultivation is quite successful in Minnesota. It should be planted in the fall, and the seed can be obtained at this office, or at most of the general seed stores. With the fence corners and out-of-the-way places, when protected from grazing animals, properly seeded with borage, mignonette or sweet clover, you could easily provide an inexpensive pasturage for a score or more of colonies. After our experience the past and present seasons, we are partial to the sweet clover, and would advise scattering the seeds plentifully.—ED.]

Oakford, Pa., Aug. 1, 1879.

I have had a good deal of difficulty in reconciling the different reports I have read in the *AMERICAN BEE JOURNAL* as to the success of comb foundation, but this season the problem has been solved to my entire satisfaction. I have 2 lots of the article. One of them came to me in a lot of bee material of various kinds, that I purchased of the executor of a deceased bee-keeper in a neighboring county. The other was sent me by Messrs. Newman & Son, of Chicago, and cost, including charges, 73c. per lb. The first is a perfect failure; I would not give 5c. per lb. for it as foundation, and can see no use to put it to, except to melt it up and use it to attach comb in frames and boxes. The Newman foundation is a perfect success. The bees go to work at it immediately, and the queen lays in the cells before



they are half finished. In inserting the foundation I first run from 1 to 3 pieces of fine annealed wire through the center of the top and bottom pieces of the frame, giving the frame a slight draw on the wires, and this keeps all straight and stiff. The conclusion I have come to is, that foundation is valuable just according to the purity of the wax of which it is made. C. W. TAYLOR.

Kearney, Mo., Aug. 6, 1879.

In the August number of the *AMERICAN BEE JOURNAL* under head of "Prospects for the Future," you put the honey crop of Missouri at "about 20 per cent. above the average," which I think is a wild statement, or rather the information is wild; that is, if in other portions of the State the yield is not far, very far greater than in this portion of Clay county. I have some 45 colonies, and have all told taken about 100 lbs. to date. Two neighbors who have nearly as many as I have, have taken only about 50 lbs. each. Last year I took nearly 1,500 lbs., and those neighbors each about 500 lbs. Our bees are carrying the honey from the partly filled boxes, below: have been all the season disposed to rob, and if the fall crop is not better than the spring and summer to date, many colonies will starve before winter. So far as I am informed there has not been more than 1 swarm for every 20 colonies that were wintered in this county. In the spring of 1878 I had only 36 colonies to begin with, against 45 last spring.

EDMUND HAYNES.

[The article in the August number of the *JOURNAL*, referred to above, was made up from extensive correspondence in the several States, and the estimates were based upon the number of bees *wintered through*. It will be found about correct in the main, but of course many districts may be found both below and above the figures named.—ED.]

Otsego, Mich., Aug. 11, 1879.

As but few bees are run on hired labor, I send you report of my hired man this season with the extractor. The linden season was short and poor; the clover fine. We have 27 bls. of clover and linden, or about 10,000 lbs., in new oak barrels made for the purpose, which do not leak and are not waxed. We use in our apiary 250 regular hives full of nice old combs, and 75 to 100 empty hives exact duplicates of those containing combs or bees. Nearly every cell of honey is capped in our apiary before it is regarded fit to extract, or extracted. The uncapping is all done with a Bingham & Hetherington uncapping knife, and the bees are controlled with two large size Bingham smokers, one of which is usually in use. The work is all done by a hired man (I mean most all), for I did uncap five hives one day for him to extract, and he had combs as fast as he could get out the honey. Our (spring) May count was 65 colonies, all fine. Our August count is 115 ready for "biz" on buckwheat, and we have faith in the fall crop, as we have never failed but once in 11 years—that was the fall of the great fire,—so if we

should fall again we shall expect a great fire and to lose all our bees. I have seen inquiry as to how much honey is required to make vinegar. Our cappings are drained 24 hours and then rinsed or soaked 3 or 4 hours in  $\frac{3}{4}$  of a barrel of spring water. The cappings are then squeezed into balls like snow-balls, and laid away. This rinsing is continued in the same water till it will float an egg. It is then put in a tub, made by knocking the head out of a whisky barrel, and covered with mosquito bar and loose boards or the old head laid on, and set in a cool place. In one year it is better vinegar for all purposes, than was ever made from cider, and of the most beautiful flavor and color. T. F. BINGHAM.

Barnesville, O., July 12, 1879.

Our bees are not doing much—no swarms and but very little honey. On examining one of my colonies a few days ago, in which I had 2 cases of 4 sections each, Gallup size, I found sealed drone brood in one section, and thought to behead them and have honey put in. On trying to remove some of them found them very tender, so that they would not draw out of cell. On a little examination, I thought them "wrong-end to," but could scarcely believe it; so we cut out a portion of the comb, and removing part of the cell, there they were, sure enough, with their heads to the center and that by the dozen, too; and on both sides. As this was new to me, I showed it to several of my bee-keeping friends, to all of whom it was also new; but as we are mostly beginners in bee-culture, we want to know what the *JOURNAL* can say about it for us. The colony is a fair to good one, with nothing peculiar in regard to it so far as known. We have faith in the *JOURNAL*.

PETER SEARS.

[The phenomenon mentioned above is a "new departure," and it would be difficult to ascribe it to a positive cause. In fact, the only way in which it can be determined satisfactorily, if at all, is by close study of the case, and experimenting with the queen and bees possessed of such *wrong-end* tendencies.—ED.]

Butlerville, Ind., July 7, 1879.

Bees in Jennings County have done very poorly this season, either in swarming or storing honey. The poplar or tulip failed to bloom as usual; besides not much here, and to-day bees are doing nothing—blacks or Italians. The first honey harvest is passed by, and was the lightest I ever knew. I have bees now on all of the combs that I lost bees from last winter and spring. I believe that in windy weather flowers do not secrete as much nectar as in calm weather, even with plenty of moisture. I hope we will have a better autumn honey flow, as we have plenty of wild asters and goldenrods which will give a good bloom till frost. Bees have stored so little honey here this season that some bee-keepers are going to quit the business entirely. July 25th.—At this time bees are doing some better, yet it is dry. There is some honey-dew. On





page 298 of the AMERICAN BEE JOURNAL, Mr. W. Bolling, of Dunkirk, N. Y., complains of the little black ants on the top of his hive or honey board. By close observation he will find they do but little harm; perhaps more good than harm. They destroy the moth-worm or grub and eggs deposited there. I will say in answer to Mr. James Heddon's question, as to the irritative effects of propolis on the bronchial tubes, that it is undoubtedly so, as the dust of the propolis has the same effect as pulverized pepper. WM. MARTIN.

✂ A correspondent in Kansas or Missouri sent us in July a sprig of vervain, with inquiry as to its name, etc., which we forwarded to Prof. Cook, who has inadvertently mislaid the letter and address, but has kindly answered the inquiries. Any person having sent a letter of inquiry in that month and not finding the same in print, will appreciate the following answer from the Professor: "The plant is the *verbena stricta* or hoary vervain. I can well believe that it is a valuable honey plant, as our common blue vervain (*V. hostata*) seems to yield much nectar, while the white vervain has surprised me the past two weeks. The dry weather has even dried up the nectar fountains of our borage, mustards and motherwort, yet the white vervain (*V. utrifolia*) is covered with bees from morning till night. This plant grows on low, damp places and so is more or less independent of drouth. I know of nothing more worthy to be sown in damp wastes for bee forage. It would take the place in such cases of motherwort and sweet clover on waste or unoccupied high ground. Our teasel came into bloom one week before the basswood, and remained in bloom more than one week after the linden had ceased to attract the bees. All this time it was freely visited by the bees."

Kane, Greene Co., Ill., Aug. 5, 1879.

I commenced in the bee business with 2 colonies, in 1877, and in 1878 I increased to 7 colonies, all in Armstrong's centennial hive; wintered on summer stands with perfect success. I have now 15 colonies, all doing well—that is, they are raising large broods and keeping honey and pollen ahead; no surplus honey yet, for it has been almost a famine here for the "blessed bees." There is plenty of buckwheat sown, and if it rains soon we may have a good fall harvest. My bees did splendidly in swarming; I never lost any. I am trying to Italianize my bees. June 11th I found a bee tree, and on the 12th we cut it and put the bees in hive No. 8. The queen was lost, and on the 13th, late in the afternoon, a bumble bee went into the hive, and the next day the bees swarmed, and you never saw such crooked traveling. I used water, bells and dirt

and they heeded it not, and I gave them up. They returned nearly back to the yard and settled on a little sprout about a foot high. I placed the same hive near them and brushed them off on the platform with an old wing, and found the queen bumble bee in the middle of the wad of bees. I killed her, then the bees went into the hive. I gave them brood comb with a queen cell on it, and they are doing well. Inclosed in a quill find a little spider or insect; please tell which, for it is the bees' friend. They are about all my hives, and the moth is nearly disinherited in my yard. About the 1st of July I saw a moth miller buzzing around hive No. 6 on the platform, then to entrance, but the bees turned her on the back track; as she turned the corner, the small spider jumped about 2 inches and caught her by the head and killed her instantly, and carried her off. They don't make much web. I now see these spiders between the division boards in every hive, where in April and May there were scores of moths and millers. As to oils, my warehouse, where I keep my coal oil and oil barrels, the floor is oiled all over, and I paint my hives early in spring and store away in this room till I need them; two hives I painted and put bees into while not dry, and I had no trouble with them. I poured kerosene all around and under some of my hives; no trouble yet. I used it to destroy the ants. The robbers from the woods give me trouble. The first part of July one small brood went into hive No. 14; there was war for a short time. I saw them come; I was watching the course of robbers. I closed all the hives down very small, so they made peace. After a few thousand were killed the robbers surrendered and went to work all right in the same hive. I dread robbers from the timber, as they are bad in such seasons. I wish never-dying success to the AMERICAN BEE JOURNAL.

RADFORD M. OSBORN.

[The insect you sent was shriveled and dried into so small a compass it would be impossible for any entomologist to determine its species and characteristics.—ED.]

Polo, Ogle Co., Ill., July 31, 1879.

Allow me to trouble you with an inquiry: One of the 7 colonies I set out in the spring began the last of May to lose bees. They would come out on the alighting board and seem in great pain, as evidenced by great uneasiness and a kind of tremor, rubbing their bodies and wings and sometimes appearing to shake themselves as if to dislodge something. They were weak and when off the board could not return. Occasionally found bees crawled into crevices between frames, and either dead or dying. Colony has lost as many as its increase; has gathered considerable stores. There is no smell about hive and it is clean; was changed when first observed that they were sick. More bees seem to die in bright sunny days than in cloudy and cool ones, or then sick bees venture out and are seen. I see none of the characteristics of dysentery. Sometimes observe the abdomen appears swollen; at others quite shrunken. Most



all the bees affected either never had or completely lose the last two bands, and that part occupied by them is black and glassy in appearance. Thinking that it might be fault of queen, at suggestion of Dr. Allabin, a gentleman of large experience in bee-keeping, took her away and gave colony a cell from which they have now a laying queen, but there is no improvement. What is the matter, and what shall I do with the colony? An answer in the JOURNAL would be greatly appreciated. The bees are idle here now for lack of pasturage. J. H. MORE.

[The complaint described above is one of those peculiar features occasionally arising among bees, as well as in the human family, frequently without precedent and often inexplicable. It may have arisen from some cause produced during winter or spring, or from one of many causes which would require much investigation to determine. Not being able to answer the inquiry satisfactorily in our own mind, we forwarded the letter to Prof. Cook, and were favored with the following indorsement: "I have heard of several similar cases. Bees have been sent to me, but I could discover no trouble. My opinion is, that it is a fungous trouble, but this is only a guess."—ED.]

Callicoon, N. Y., July 25, 1879.

The season of basswood and clover bloom in this county has not yielded well, owing to its having been too wet and cold, especially evenings and mornings, cutting off the usual best hours of labor. With us the Spring honey crop is cut short at least 50 per cent. A. E. WENZEL.

Lincolnville, Ind., Aug. 11, 1879.

My sample hive, with prize boxes and tin separators, which I ordered from Hartford, Wis., came to hand, and I put the first swarm into it June 5; took the boxes out the other day all full of nice comb honey in good order. I might perhaps have had another set filled, if I had had them. I must try to have a thousand or two of them ready for another season, together with enough broad frames to hold them. This is the nicest way of obtaining honey in good shape I ever tried. I have been using 2-story hives, and cutting the honey out of the upper frames. I had a swarm June 26, which I put into one of these hives, and July 8th I opened it and cut out 27½ lbs. of nice, white comb honey, leaving the comb in one of the frames above and not interfering with any in lower story. Who can beat that? The hive has 9 frames below and 9 above; the frames are 11 inches square. The 18 frames were all filled in 12 days. My bees are the native gray or yellow bee, and are good workers; I do not know whether the Italians are any better or not. I received 3 queens from H. A. Burch last Saturday, and introduced 2 of them in 2 of my hives, after taking out their queens. I think it was not the proper time for Italianizing, being cool nights and a time of

scarcity of honey. A great many robbers came among them before we could find the queen, as we had to go over the frames the second time before we found her; then, after sprinkling the combs and bees with sweetened water with a few drops of peppermint in it, and sprinkling well the Italian queen we introduced her. The colony, a strong one, then commenced a general slaughter, and next morning I found about a pint of dead bees around and in the entrance, nearly stopping it up. I cleared them away, searching diligently for the queen, but failed to find her among the slain. It is now about 48 hours since we introduced her, and the bees seem to be quiet and at work some. I am in hopes she is not killed. The other hive had not so strong a colony and we found the queen more readily. We took her out and introduced the Italian. We, however, did not proceed with this one as we did the other; we first smoked them, and then carried them under a shed, putting another hive on the stand to catch the returning bees. When we had the new queen introduced, we brought the hive back and placed it on its old stand, after removing the one we had placed there, shook the bees out of it and they entered their former home. We closed up the entrance so that but few bees could pass in and out at a time. There were not near so many killed at this hive as at the other. There seems to be a pretty strong guard at and about the entrance, and when a bee comes flying around suspiciously they dart at it. This is my first experience Italianizing; I don't know what the result will be yet. JOEL BREWER.

Paoli, Ind., Aug. 1, 1879.

Inclosed you will find sample of weed or bush. I would like for you to tell me what it is. The bloom is white, and the bees work on it all the day. I have been keeping bees 6 years, and I never knew so poor a season. I have known some young colonies to desert their hives on account of no honey. Please inform me if this plant will pay to cultivate for bees. B. M. LINGLE.

[This is sweet clover (*Melilotus alba*) and with the bees at the JOURNAL apiary has been the best honey plant this season. It commenced to bloom about the 10th of June, and at this writing (Aug. 4) our bees are gathering honey from it quite plentifully. In fact, the bees prefer it to mustards and all other plants growing in West Chicago, where it has been growing spontaneously along the streets and roadsides for years—certainly since 1871-2, and we cannot learn when it was cultivated. The honey from sweet clover is nearly or quite as desirable as that from white clover. We think if anything alone will pay to cultivate for honey, this will; but, unfortunately, it has the reputation of being good for nothing else. Why not plant your fence corners, lanes and by-ways with sweet clover?—ED.]





Rochester, Pa., July 18, 1879.

Inclosed I send you this plant. Will you let me have a name for it? It grows along the Ohio river, on the gravelly banks, from 2 to 3 ft. in height, and resembles sweet clover, but it is something else. It is very thick on the ground, blooms all summer and is the finest bee pasture that grows until frost comes. Please let me have a name in English (for it is a perfect harvest for bees) and confer a favor on the bee club here.

WM. W. CAGUE.

[The twig you sent is, in plain English, sweet clover (*Melilotus alba*), and, as you say, is "a perfect harvest for the bees." It is worthy of all the praise that has been given it. In answer to B. M. Lingle, Paoli, Ind., in this number of JOURNAL, find our experience with it this season.—Ed.]

Crown City, O., July 22, 1879.

There are a great many bees kept in this neighborhood, mostly in common boxes or log gums in a hap-hazard way, and generally winter well. The greatest drawback is too frequent swarming, and the moth takes possession. Very dry here, and bees will hardly get winter supplies. They did very little swarming about here; are strong in numbers for winter. I will not have a pound of surplus from my 100 colonies. Success to the JOURNAL.

C. S. NEWSOM.

Winchester, Va., August 5, 1879.

This has been the poorest season for surplus honey that we have had for 10 years; my yield will not be over half the usual amount per hive. All the bee-keepers I have talked with give the same report. We do not expect any fall surplus; in my experience of 12 years I have never obtained any surplus honey after July 15, except one year when I got about 15 lbs. per hive of fall honey in September. We have a great many bee-keepers in this county. There are more than 1,000 colonies of bees in and within 5 miles of town, not including the two or three that almost every farmer keeps. I had one swarm this summer; now have 94 colonies.

J. FEW BROWN.

Collins, Ill., July 21, 1879.

The loss of bees in this section has been 50 per cent. at least in this vicinity, during the winter and spring. Bee-culture is in a very low or backward state. I am doing all I can to get my neighbors to adopt frame hives of some sort, and am trying to persuade them to take some kind of bee-literature; have succeeded in getting some of them to subscribe for the AMERICAN BEE JOURNAL, which I think is the best authority of anything that is published. How is this? I undertook to Italianize my apiary, and removed all of the drone comb from all of my hives, and have kept it pruned out; but one of my young queens got fertilized and commenced laying in the nuclei hive, and then was lost or died; but the bees hatched out the brood and a portion of them were drones, hatched in worker cells and

among the worker brood. The cells were built out a little longer than the rest. The drones so hatched were as well marked as those from the old queen, but not so large. The young queen must have been fertilized by some of my neighbors' black drones, for I had no drones from my old queen when she was fertilized. Will Italian bees, reared by black bees, be as bright-colored as those reared by Italian bees? I have thought I could notice a difference.

M. A. NEWMAN.

[Your young queen was a drone-laying queen, caused either by want of fertilization in time or by injuries received. If a queen has passed too long a period before meeting a drone, the drone eggs are apt to predominate, and when there are no drone cells to deposit those eggs in, why worker cells would be the next in order. The queen was undoubtedly killed and removed by the bees as they would try to supersede her, when her infirmities became known. We think it matters not what bees rear the young ones, if the eggs are from a pure queen.—Ed.]

Platteville, Wis., July 21, 1879.

We had the best show for basswood honey this year that I ever saw; but who can tell what is coming? Just as the blossoms were nicely open and ready for the bees we had two all-night rains that washed the honey out clean, so the basswood honey crop was cut short. My bees worked on it only 8 days; it was done July 11th or 12th. The bees would steal or rob so bad we had to quit. I have the honey from 101 colonies of bees and their increase—8,200 lbs. so far, mostly extracted; a little over 80 lbs. to a colony—rather a small yield. But I think we will get some buckwheat honey yet, if the weather is dry. I find that wet weather is bad for honey, the flowers not secreting honey so well, and what we do get is thin.

E. FRANCE.

Greenleaf, Minn., July 18, 1879.

I commenced to keep bees last year with 3 colonies, and increased by natural swarming to 12; lost 1 this spring; had good luck last year, but this year they act as if they were deranged. There have only 7 new swarms come out, and 5 of these swarmed out when they were 2 days old; the first one clustered and I hived it again, and it stayed all right; but last Saturday the next one came out and left, and the same day 3 new ones swarmed. We had 1 hived and 2 others came out almost at once, but clustered separately on one tree. We hived them and put them into the bee-yard, and all at once 1 swarm left and went into the hive that we hived an hour before; I divided them, but did not find the queens; put a frame containing eggs in both hives, and they all seemed right till Monday. Sunday morning my swarm that left, or some other one, came back and went into the other one that came out the day before, and Monday they all swarmed out and clustered, and we tried to hive them, but they would get together.



We could find no queens in such a mass of bees, but at last they got into and onto 2 hives, about a swarm and a half in one hive I should think, and the other  $2\frac{1}{2}$  swarms in and on another. I put another hive on top, and I never saw bees work as they all do now. I put eggs and brood into the hive when I divided, but they would not stay. My old bees are mostly in box hives, but I am putting the new ones into frame hives: frames 17x10 in., 8 in a hive. I do not know what ails them—the pasture is good. I have a small piece of buckwheat in bloom and a little mignonette. There is considerable basswood, any amount of sumac and other things. They worked well the 2 days that they stayed, had considerable comb and honey and some had eggs. I do not think they all had eggs. They were the largest swarms I ever saw. They were having extremely hot weather.

J. C. PETERS.

Hokah, Minn., July 17, 1879.

I am a new hand with bees, and perhaps have a new idea as to wintering them. Would like to know if the following has ever been tried, and if so, what result; also your opinion of it: Make a box 16 feet long, 10 inches high and 16 inches wide, with places for frames to rest upon; set in 10 frames, then 1 frame with wire cloth; then No. 2 colony, then wire frame No. 2, and so on until you get 12 colonies in it, each hive to have an outlet. This box is to be inclosed in one 18x24 inches, to form a dead-air chamber; also to set out doors all winter. I think one will help keep the other warm, thus making it a good winter-house for the yellow pets. *THE AMERICAN BEE JOURNAL* is a welcome visitor; my neighbor bee-keepers are very fond of it, as I cannot keep one any length of time. Bees have done well so far. Plenty of white clover and basswood. WM. LOSSING.

[We doubt whether your plan would operate satisfactorily. The center colonies would undoubtedly contract too much heat, while trouble would arise from too close proximity of queens, with but the wire screen between, and we imagine a complete demoralization would ensue during winter flights.—Ed.]

Forestville, N. Y., July 22, 1879.

In reading the July number of the *JOURNAL*, I see reports of heavy losses of bees in almost all parts of the country by dysentery. I would like to say that it is proved to my satisfaction that cold and improper ventilation are the prime causes of this disease. In preparing bees for winter, we should be very careful that the work is done in the best possible manner, and after placing them in cellars or other repositories, great care should be taken to keep an even temperature, occasionally warming the air very gradually 2 or 3° to dry dampness and purify the air in the repository. We should be watchful of the least change in the temperature and meet it; if cold, by fire; if warm, by snow or ice. All this can be done without disturbing the bees, if properly arranged, as I think disturbance greatly ag-

gravates the disease. I have wintered the past two winters in a very damp cellar quite successfully, with but slight signs of dysentery, and am confident that I could have prevented that if I had not been called from home during a severe cold spell of weather, consequently the temperature in my cellar became too low. Some time perhaps I will give my manner of preparing my bees for winter, and report my success from time to time. *THE AMERICAN BEE JOURNAL* grows in interest with every number. H. D. G.

Iola, Calhoun Co., Fla., July 28, 1879.

Inclosed find a sprig of a vine growing in our swamps. We are anxious to know what it is. Will you please send it to Prof. Cook and advise us through the *JOURNAL*? We have taken 500 gallons of honey this year, and will get 50 or 60 gallons more, as the vine we send a twig of is now in bloom, and will continue until September. We have also taken several thousand pounds of beautiful honey in glass. The *JOURNAL* is a great treat to us.

ALDERMAN & ROBERTS.

[The specimen sent is too small for identification.—A. J. Cook.]

Bethany, Ill., Aug. 1, 1879.

Bees in this section gathered considerable honey from white clover and the tree blossoms previously, but have had but little disposition to swarm this season; too much honey in the brood chamber, and, of course, they did not get strong enough to store much surplus honey. The past 3 weeks they have gathered but little, but have been breeding very fast all the time, and have used the honey in the brood chamber, thus becoming in good condition for the fall honey yield, if there is any. At present the weather is very dry in this county.

A. M. RHODES.

Martinsburg, Mo., August 6, 1879.

Enclosed find a twig, with leaves, flowers and berries taken from a small shrub which grows about  $2\frac{1}{2}$  feet high; the berry is red when ripe. A great number of bees are on it from early in the morning until late at night. Will you please give the name for it?

E. R. DOUGLASS.

[This is *Symphoricarpos vulgaris*, a shrub belonging to the honeysuckle family.—W. J. BEAL.]

Canton, N. Y., July 28, 1879.

Our bees have just finished up their work and we are blessed with a good honey crop. The spring was very promising, and the 1st of June found our hives full of honey and bees, but the first 12 days were cold and wet and delayed swarming. Since then the bees have lost but one day on account of rain, although the high winds hindered them very much. From briars they gathered plentifully, and from briars to white clover. In this section nearly every farmer sows alsike clover, but it blooms with white clover. If we could have had one more shower, this would have been one of the best clover-honey seasons for many years, but the dry





weather cut it short for about 8 days. About the 11th of July bees struck basswood in full bloom about sunrise, and bee-keepers know how excited the bees become. We find ourselves with an abundance of honey, and have had one of the best of seasons. I report from my small apiary of 39 colonies the 1st of June, all told, 41 young swarms, and 2,000 lbs. of surplus honey. The price of honey in this section, I think, will be about 12½c. per lb. by the 100 lbs.

JAMES BAIRD.

Farragut, Iowa, August 18, 1879.

I send you a branch of weed that I would like the name of in the next JOURNAL; I thought it might be pepper tree, but do not know. I never saw but one stalk in this country, and cannot imagine how it came here. It is in my apiary, and has been in bloom over a month; is always covered with bees. Bees have not done very well here this year, being a poor summer. Last winter about 30 per cent. died. I wintered 20 colonies successfully in the cellar. They are doing well now. E. J. ROCKEFELLOW.

[This is *Scrophularia nodosa* or Figwort. For figure see Manual of Apiary, page 238. It is a common plant in the northern states, and is often referred to in Mr. A. I. Root's paper and book as Simpson's honey plant. —A. J. COOK.]

Pawnee City, Neb., Aug. 9, 1879.

I must say that I am very much pleased with the AMERICAN BEE JOURNAL; I am also a lover of the "blessed bees." Last year I commenced with 1 colony: increased that year to 7, and got \$10 to \$12 worth of honey. Through the winter a goodly number of bees died, and I came out queenless, but finally all recruited up again. This season, as far as I can find out, in this locality bees are doing very poorly, but very few have swarmed naturally. I increased mine to 12. Surplus we have none to expect, if they gather enough for their own use, we will say well done.

P. BILLING.

Brandywine Summit, Pa., Aug. 18, 1879.

My apiary house and about 2,000 lbs. comb honey were burned on the 11th inst. No clue to the incendiary has been found. Bees have fared the worst this season we ever knew. All the time the white clover was in bloom the nights were cold enough for October, and we could not get the bees to stay in the boxes over night; they would return to the brood combs. We took 3,000 lbs. from 200 colonies, all comb honey. They are working nicely now on buckwheat; if they continue another week, our crop from buckwheat will exceed that from white clover. I saw that the bees deserted white clover and worked very freely on red clover, something I never saw before. We would have lost our entire crop of honey by the fire, but, fortunately, had over 1,000 lbs. stored in another building. About 8 colonies of bees were ruined by the flames. Another apiary in the neighborhood was entirely destroyed by the building being set on fire, together with 25 colonies of bees adjoining. The apiary belonged to Marshall Fell, at Mar-

shalltown, Pa. It was well cared for, and had been much admired for its beauty. When the wax got on fire in the hives, persons could not get any where near to remove the adjoining hives. J. T. WILLIAMSON.

Eminence, Ky., August 17, 1879.

Enclosed I send you a sprig of a plant that I have been watching for 2 years. Please tell me the name of it (the common name also); it stays in bloom about 7 weeks and is constantly covered with bees from morn till night, even in time of white clover bloom. It commences to bloom about the middle of June, grows in bunches like sage; grows mostly in low, wet ground; but I have some under cultivation in the garden with same results. I send you a few seeds. I set out plants; have never tried the seed. It surely is a fine honey plant. Answer in BEE JOURNAL.

W. T. STEWART.

[The sprig and seeds you send are motherwort.—ED.]

West Branch, Iowa, Aug. 19, 1879.

Has there been any arrangement made with the C., R. I. & P. R. R., for reduced fare to the North American Bee-Keepers' Convention, to be held Oct. 21, in Chicago? If not, please see if anything can be done, as there will probably be a considerable number who will wish to go over that road to attend. Please answer through the JOURNAL. Bees have been doing poorly for the past month in this locality. The honey harvest was of very short duration, and will not be more than half of last year's crop in amount. Colonies are generally stronger than last year at this time, on account of not swarming so much. Last season the bees had a general swarming mania.

C. T. PENROSE.

[No special arrangement can be made with the above named road. When ten or more persons wish tickets at one time, from the same station to Chicago and return, over that, and nearly all other roads, they can be obtained in Chicago at excursion rates, which are one and one-fifth fares—that is, a reduction of four-fifths on the return tickets. The JOURNAL, in its July number, p. 294, gave a list of all the roads with which the Executive Committee could make special rates.—ED.]

Bloomington, Ill., Aug. 14, 1879.

Bees at present are at a stand-still. I have now in a fair condition 53 colonies, and my son has 73. We have some hopes of more honey in the fall. Plenty of rain, and an abundance of heartsease coming into bloom.

J. L. WOLCOTT.

Callicoon, N. Y., Aug. 19, 1879.

My estimate last month of honey crop should be reduced at least one-half, as we shall not get 25 per cent. of usual quantity. Buckwheat is now in full bloom, but the bees cannot get at it on account of unfavorable weather.

A. E. WENZEL.



Coopersburg, Pa., Aug. 11, 1879.

I inclose you two species of bee plants to examine, and please report in the next AMERICAN BEE JOURNAL. The first (No. 1) is a sort of climbing shrub, and seems to be a great favorite with the bees, while No. 2 is also visited by them, but does not seem to please them like the former.

PRESTON J. KLINE.

[No. 1 is *Clematis Virginiana* (common virgin's bower) and is undoubtedly a good bee plant, especially in dry weather, as it is a shrub and roots deeper than an herb, or rather has larger roots, and is less sensitive to drouth.

No. 2 is *Eupatorium purpureum* (trumpet weed or Joe-pyeweed). It is as nearly related to boneset or thorough wort, as red oak is related to black oak, or white ash to black ash. I have received it from bee-men for several years past.—W. J. BEAL.]

Mt. Pleasant, Iowa, Aug. 8, 1879.

Inclosed you will find a flower plant which you will please name. It is a prairie plant, growing along the edge of sloughs in cultivated fields, and flowers from Aug. 1st to frost; an annual; yellow flower with seed pods resembling those of the locust. I call it a beautiful flower plant, and one of the best honey producing plants in the West.

CHAS. McMILLAN.

[Prof. Beal has kindly identified the plants as *Cassia chamaecrista*, patridge pea or sensitive pea. The partridge pea has often been praised, as will be seen by referring to back numbers of the AMERICAN BEE JOURNAL.—ED.]

Columbus, Ky., Aug. 6, 1879.

I send you a specimen of a plant that abounds in this region. Never saw it till I came to what is called the Green river country in Southern Kentucky. It grows on almost all kinds of soil—by the roadside, on old rocky knolls, on old worn-out fields, in lanes and alleys, and on good ground. Dry weather is a mere circumstance for it. It is regarded as a great nuisance. But I observe that sheep and the Colorado potato bugs eat it with avidity. It blooms all the season through till frost; is rich in pollen, and the bees resort to it very early in the morning, especially in a dry season like this when other pasture fails. What is it? Never heard a name for it. No surplus honey gathered here, and a natural swarm this season has been a rare thing. The summer has been one of extreme drouth. I am feeding my weak colonies—such as were formed artificially this season. From Mr. Argo, of Lowell, Ky., I have learned an admirable plan for introducing queens at this late time, when robbers abound—or rather, it is for capturing the queen that is to be removed. Say it is a Langstroth hive. Take off the honey board, replace the cap, smoke well at the entrance; then close the entrance, and rap on the hive 5 or 8 minutes. In front of the hive spread a sheet on

a board, lift the cap, and shake out the bees that are in it on the sheet 5 or 6 feet from the hive,—a third or more of the bees will be in the cap with the queen,—set the cap in front of the hive with its edge slightly raised, and the bees will crawl to it, and the queen can be easily observed and picked up. As soon as the cap is lifted from the hive a cloth should be spread on the latter to exclude robbers. In this way I have had the queen captured and caged, and the hive all in good order as at the start, in 6 minutes. Then you proceed to introduce the new queen, with the usual caution at this late season of the year. Rarely a queen will be found that will not leave the combs and go up into the cap. In that case I remove the hive, at 30 to 60 minutes by the sun in the evening, to some vacant room, shop or out-building, and search for the queen in usual way, and have not been troubled by robbers.

GEO. J. REED.

[This is *Solanum Virginianum*. It is much like another called horse-nettle—a vile thing.—A. J. COOK.]

Grantville, Ga., Aug. 8, 1879.

Will the Rev. C. Lacy, who wrote on the "Bee Cell" and explains how they came thus, explain the formation of the drone cell? It will take drones to build drone comb, if his rule of sixes has to be worked.

A. B. STROUD.

Bee Creek, Ky., Aug. 16, 1879.

1. Is a colony of bees in a healthy condition if the old bees carry out young bees just before it is time for them to hatch out? I notice a few of the cells the caps have sunken in and some of them look as if there had been a pin stuck through the cap; most all my bees are that way. I have not noticed them taking out very many bees yet. 2. I have a hive that is queenless and without any brood except quite a number of drone cells that have from one to three eggs in a cell, and about half a dozen worker cells around the outside of the drone cells have eggs in; the rest of the hive is pretty well filled up with the bread and honey. They have a few queen cells capped over. What is the matter, and what shall I do with them? 3. How shall I get my bees to work in boxes? They are taking in lots of honey.

IRA M. ALLING.

[1. No. The sunken cells are a pretty sure indication of dead brood, and the holes in the cappings are certain indications of it.

2. The queen was old and superannated, or from some physical cause had become drone-laying. We would not like to waste time in testing the queens which may emerge from the queen cells. Better introduce a good prolific queen at once; as the old queen should have been superseded without compelling the bees to do so.

3. If your bees are bringing in lots of honey and not working in the boxes, it is an indication that they find plenty of room below. Contract your brood chamber or wait till they fill it.—ED.]





Gibson Station, Ind., Aug. 18, 1879.

Herewith find bloom from plant and a bee that worked on it. The bees work very numerous on it, get their feet fastened, and other bees drag them loose. They go right back in the hive. I think the bees get plenty of honey from it. Please give name in the JOURNAL. CHAS. KELLER.

[This is a species of Asclepius or milk-weed. The bee also sent is loaded with the pollen masses. These saddlebag-like masses are illustrated in Manual, p. 233. Our bees have worked very lively on the milk-weed of late, as from the extreme drouth most flowers have failed, while the milk-weed on the low lands has continued to bloom.—A. J. Cook.]

Carlinville, Ill., Aug. 11, 1879.

You can place me in the "blasted hopes" column for this season. "Tis awful!" We have obtained no honey this season, the weather being so dry that the bees got but little from white clover and linden. We are obliged to feed some colonies now, and all are getting short of stores, with poor prospects for fall honey. We planted a lot of buckwheat, but it has been so dry that but little of it came up, and that little does not grow. I could do but little in queen-breeding, the bees robbing the nuclei so badly I was obliged to unite them, and stop trying to rear queens. A few miles north and south of us bees have gathered some surplus honey, but in this vicinity they are starving. Worse than all, I have been terrible afflicted all summer—not able to be about more than one-half the time. You see things do not look very bright. Hope you and others of the bee-keeping fraternity may be prospering. J. M. VALENTINE.

Clifton Springs, Fla., Aug. 14, 1879.

I inclose you a sprig of a plant that grows here, blooming during the months of February and March. The blossoms, which are a pale blue, make their appearance on a cone-shaped burr about an inch in diameter and an inch long. It is located at the end of the stems. The plant grows on pine land, having scrubby undergrowth, with saw palmetto. In some localities it is quite numerous, covering acres of land. From the number of bees frequenting its blooms it must be rich in honey. It is claimed that honey produced from it has a peculiarly delicate and delicious flavor—the aroma of the plant being perceptible. It is called here pennyroyal, but does not resemble the plant known by that name which grows in Alabama, except in its odor. If you can ascertain its botanical name from the specimen and description, please give it through the columns of the next number of the AMERICAN BEE JOURNAL. A. B. BEALL.

[It is hardly safe to name plants without flowers, but from the stem I think this plant is without doubt the *Hedeoma hispida*. The American pennyroyal is *H. pulegioides*. Will Mr. B. send bloom when it is convenient?—A. J. Cook.]

## Local Convention Directory.

1879. *Time and Place of Meeting.*  
 Sept. 2, 3.—N. E. Wisconsin, at Watertown, Wis.  
 17.—Warren Co., Iowa, at Indianola, Iowa.  
 30.—Southeastern Iowa, at Mt. Pleasant, Iowa.  
 Oct. 2.—Union, at Shelbyville, Ky.  
 2, 3.—Southern Kentucky, at Edmuntson, Ky.  
 7.—Central Kentucky, at Lexington, Ky.  
 7.—Albany County, N. Y., at Albany, N. Y.  
 15.—Central Michigan, at Lansing, Mich.  
 21.—National Convention, at Chicago, Ill.  
 Nov. 10.—Lancaster Co., Pa., at Lancaster.  
 1880.  
 Jan. 13.—N. W. Ill. & S. W. Wis., annual, at Davis, Ill.  
 Feb. 11.—Northeastern, at Utica, N. Y.

☞ In order to have this Table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

## Honey Markets.

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HONEY.—White clover, put up in single-comb boxes, in slow demand. Prices paid for such, 10¢@12¢. When more than 1 comb in a box, 9¢@10¢. Dark, in the comb, slow sale at 9¢@11¢. Extracted Honey, white, 7¢@8¢; dark, 6¢@7¢.  
 BEESWAX.—Prime choice yellow, 20¢@22¢; darker grades, 12¢@15¢.

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☞ We wish to remind Canadian correspondents that we cannot use Canada postage stamps, and it causes much vexation to convert them into money.

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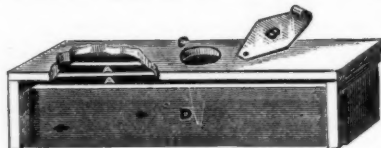
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